

ixi-UMS Voice-Mail Server

Installation & Configuration

Onlineversion

Content

1 Ir	Introduction	4
1.1	1 Requirements	5
1.2	2 User Management	6
1.3	3 Mailbox Access	6
	4 ixi-UMS Notifier Express	
	5 License	
	6 ixi-UMS Voice-Mailbox Configuration	
	Installation Preparation	
2.1	1 Preparing your Messaging System	10
2.	2.1.1 Exchange 2013/2016/2019	
	2.1.1.1 IMAP4 Access to all the Mailboxes.	
	2.1.1.2 IMAP4 Access	
	2.1.1.3 Relay Enabling for the ixi-UMS Voice-Mail Server	
	2.1.2.1 IMAP4 Access to all the Mailboxes	
	2.1.2.1 IMAP4 Access to all the Mailboxes.	
	2.1.2.3 Relay Enabling for the ixi-UMS Voice-Mail Server	
	2.1.3 Lotus Domino	
	2.1.3.1 General	
	2.1.3.1.1 Task Status and Ports	
	2.1.3.1.2 Starting and Stopping Services	
	2.1.3.1.3 Force Configuration Changes.	17
	2.1.3.2 SMTP	18
	2.1.3.2.1 Enable SMTP Listener Task	
	2.1.3.3 LDAP	
	2.1.3.3.1 Permanently Starting LDAP Task	
	2.1.3.3.2 LDAP Configuration	
	2.1.3.3.3 Change LDAP Port	
	2.1.3.4 IMAP	
	2.1.3.4.1 Permanently Starting IMAP Task	
	2.1.3.4.2 IMAP Configuration	
	2.1.3.4.4 Mailbox Full Text Index	
	2.1.3.4.5 Allowing Access to Own Mailbox.	
	2.1.3.4.6 Adjusting Mailbox ACL	
	2.1.3.4.7 Configure "Master Account" IMAP Access	
	2.1.3.4.8 Check IMAP Qccess with MS Outlook Express.	
.		
	Installation	
3.1	1 Select Language	28
3.2	2 Welcome	28
3.3	3 License Agreement	29
3.4	4 Select Destination Location	29
	5 Ready to Install	

3.6 ixi-UMS Kernel	30
3.7 Select Mail Server and LDAP	31
3.8 Mail Server Configuration	32
3.9 LDAP Configuration	33
3.10 Voice Mailbox Configuration	
3.11Finish	
4 ixi-UMS Voice-Mail Server Configuration	
4.1 General	
4.1.1 Welcome Mail	
4.1.2 Phone Number Configuration	
4.1.3 Templates	
4.2 LDAP	
4.2.2 Registration Data	
4.2.3 Search	
4.2.4 Advanced	
4.3 Mail System	
4.3.1 IMAP	
4.3.2 SMTP	
4.3.3 Advanced	51
4.3.4 Individual IMAP-Login	52
4.4 Location	53
4.5 Notifier Express	55
4.5.1 Default User Settings	55
4.5.2 Reset	56
4.6 TTS	57
4.7 Global User Settings	58
4.7.1 Voice Mail	58
4.7.2 Login via Telephone	60
4.7.3 Remote Inquiry	
4.7.4 Language	
4.7.5 Profile	
4.7.6 Office Hours	
4.8 Personal Homepage	
4.9 Menu Structure	
4.9.1 Configuration	
4.9.2 Remote Inquiry	
4.9.3 Format	
4.10 Log	
4.11Information	70
5 ixi-UMS Voice-Mailbox User Configuration	71
5.1 Active Directory Snap-In	
5.1.1 Voice Mail	

5.1.2 Remote Inquiry	74
5.1.3 Mailbox	75
5.1.4 Notifications	76
5.1.5 Reset - Unlock voice-mailbox	77
5.2 ixi-UMS User Management	78
5.2.1 Voice Mail	
5.2.2 Remote Inquiry	81
5.2.3 Mailbox	82
5.2.4 Notifications	83
5.2.5 Reset - Unlock voice-mailbox	84
5.3 Lotus Domino	85
5.3.1 Voice Mail	86
5.3.2 Remote Inquiry	87
5.3.3 Mailbox	88
5.3.4 Notifications	88
5.3.5 ixi-UMS User Data Attributes / Tools	89
5.3.6 Reset - Unlock voice-mailbox	89
6 Info	90
6.1 About estos	90
6.2 Version	90

1 Introduction

The ixi-UMS Voice-Mail Server is essentially a voice mail box system with remote inquiry. However, it provides some additional interesting features which are not included in a traditional voice mailbox system:

- Quick message option which allows a caller to leave a message immediately by pressing the "0" while the announcement is playing
- Individual and personalized announcements. Individual announcements are completely determined by the user while a personalized announcement consists of a part that cannot be changed by the user and an individual part (e.g. the user name) that can be recorded by the user
- Supports 6 profiles and one profile for calls from internal extensions with 2 announcement languages each.
- Any number of announcements in different languages can be recorded per profile
- A call transfer destination may be specified per profile. Callers then have the option to to leave a message or to be transferred to a colleague
- Profiles can be switched automatically company-wide per working day, according to work/non-work hours
- The announcement language can either be selected automatically according to the caller address (country code in telephone number) or manually by voice menu
- You can choose to listen to unread/read voice mails and unread/read emails (which also includes faxes and SMS)
- Messages can be deleted or moved to a trash folder
- ixi-UMS Voice-Mail Server directly accesses your mailbox, this is why new messages are indicated and deleted messages disappear immediately
- The following properties of a message are read: Message type, date/time, sender address or name, subject and the body text
- The sender of a voice message can be called back directly.
- Fax messages and E-Mails can be forwarded as faxes.
- Voice messages can be forwarded as voice mail and provided with a spoken comment.
- Replies to messages can be sent
- Each user can specify a PIN to protect access to his voice mail box
- Users can be informed about new messages via SMS and/or MWI.
- Security features: The access to the ixi-UMS Voice-Mailbox can be restricted to specific devices (e.g. office telephone or mobile phone). After a specified number of failed attempts to enter the PIN, the remote access to this mailbox is locked.
- Configuration over the phone or a webpage-based ixi-UMS Voice-Mailbox Configuration, which can be made available via the ixi-UMS portal

1.1 Requirements

Hardware Requirements:

- Processor with more than 2000 MHz
- 1 GB free Memory
- minimum 100 MB of free hard disk space + at least 0.5 MB per announcement storage space
- Network interface card
- CAPI 2.0 compliant ISDN board, H.323 / SIP

Software requirements:

- Windows 10 (32 / 64 bit)
- Windows Server 2012/2012R2
- Windows Server 2016/2019
- at least ixi-Framework 7.0 installed
- at least ixi-UMS Kernel 7.0 installed

Telephone system

Call transfer requires special features on your ISDN board/PBX *

ISDN

Benötigt	ISDN-Karte	РВХ
	DSS1 Protokoll, Capi 2.0	DSS1 Protokoll, Hold/Retrieve
Point-to-Multipoint	Suplementary Services	(ETSI EN 300 369 -)
Fornt-to-Mutupoint	Hold/Retrieve and ECT	ECT with Implicit Linkage or
		ECT with Explicit Linkage
Point-To-Point	Qsig Protokoll, Capi 2.0	Qsig Protokoll,
	Suplementary Service ECT, CAPI	Call Transfehr or PathReplace
	HECT implemented as Qsig CT	
	und / oder Qsig PathReplace	

Voice over IP

When the features transfer / connect and/or callback shall be used, the following features must be supported in addition:

bei SIP:	bei H.323:
Standard SIP "INVITE" und "REFERE"	H.450.2 "Call Transfer supplementary service for H.323."
	H.450.4 "Call Hold supplementary service"

The service HOLD is needed to hold an active call in order to make the call transfer after having made a consultation call. Retrieve is needed when the consultation call or the call transfer was not successful in order to reactivate the held call. For more detailed information about the connection / configuration of the ixi-UMS VoIPconnect for your PBX, please turn to ixi-UMS support department.

Introduction 5

1.2 User Management

One of the key features of the ixi-UMS Voice-Mail Server is its integrated user management. This means that user settings for ixi-UMS Voice-Mailbox can be made directly in the LDAP server of your messaging system if your are running one of the following systems:

- MS Exchange
- Lotus Domino

Any other system must meet the following requirements:

- User management is LDAP based
- It must be possible to gain read/write access to the LDAP database
- There must be a per user attribute which can be used to store ixi-UMS Voice-Mailbox User settings.
- If there is no such attribute, the system must support an extension of the schema mechanism to add an appropriate attribute.
- IMAP login data must be obtainable via one or more LDAP attributes. In Exchange, for example, the samAccountName attribute contains the IMAP user name.

If one or more of these requirements are not fulfilled, it is recommended that you use the ixi-Framework OpenLDAP Server for user management.

Note:

In order that the user can carry out changes in his profile settings via the phone, a write access to the LDAP list is necessary. If this cannot be guaranteed, the profile data can be stored locally on the server.

1.3 Mailbox Access

Another key feature of the ixi-UMS Voice-Mail Server is that it directly retrieves and handles voice mails, e-mails, faxes and short messages (SMS) - depending on the version installed - from the user mailboxes located on the messaging system. No replication between ixi-UMS and the messaging system store is performed.

In order to be able to intercept the messages by telephone, the messaging system must fulfill the following criteria:

- Support of the IMAP protocol in order to access the mailboxes
- Administrative access to the mailbox stores, this means that every mailbox can be accessed with one particular user/password

Alternatively, every user must deposit his own password for the ixi-UMS system in the LDAP-data base. The user gets a link to the respective entry-site with the "Welcome Mail".

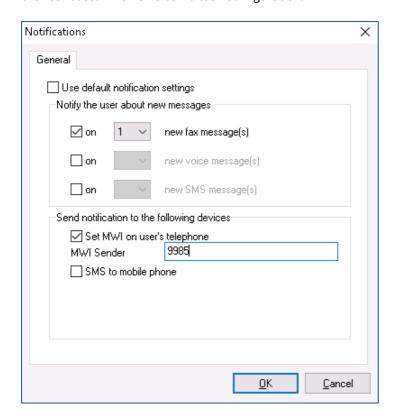
The following methods of administrative access are supported:

- 1. The account entered in the ixi-UMS Voice-Mail Server logs in into the respective user mailbox by the use of the alias (read out from the LDAP-data base). This method is common e.g. with Microsoft Exchange 2010/2013/2016/2019
- 2. If the IMAP Server supports the "Other Users" namespace according to the RFC 2342, it is possible for the administrator to see the mailbox store of the users. With the particular access permission it is possible to access the mailbox stores with the administrative account. This method has been tested with:
 - Lotus Domino 7 and higher
 - Cyrus IMAPD
- 3. Specification of the complete "path" to the inbox of the user

You can find further information and possibilities in How To: "IMAP4 Login".

1.4 ixi-UMS Notifier Express

The ixi-UMS Notifier Express is a service for the notification of new faxes, voice mails and short messages (SMS). When a new ixi-UMS message arrives at the ixi-UMS Kernel, the created "rule" is checked by the Notifier Web Service. The settings can be made globally at the ixi-UMS Voice-Mail Server, per user in the LDAP data base and / or by the user via the browser-based ixi-UMS Voice-Mailbox Configuration.



The Notifier Express Service activates the respective notifications when messages come in. With the signaling at the telephone, the UMS recipient number (extension) is displayed on the phone as sender.

Please take notice of the information in the <u>User</u> <u>Management</u>.

As the settings are stored in the LDAP data base, the ixi-UMS Notifier Express is independent of the messaging system.

Notifications about new e-mails are not possible, because the ixi-UMS system does not "know" about arriving e-mails.

When the messages are **accessed via the ixi-UMS Voice-Mail Server** (access by telephone), the message counter and the MWI-status at the telephone (if applicable) is reset as soon as the user calls the message menu.

When the messages are accessed via the mail client, the message counter and the status indication at the telephone - if applicable - must be reset manually.

This is possible for the user via the ixi-UMS Client Tools or via a respective mail to: NOTIFIER_EXPRESS_OFF@ixialert.com.

Notifications can be sent:

- o as MWI to workstation telephone
- o as SMS to mobile phones

1.5 License

ixi-UMS Voice-Mail Server is released via the **ixi-UMS Kernel license key**. The ixi-UMS Kernel license key controls the feature set the ixi-UMS Voice-Mail Server provides. Therefore, you do NOT need a separate license key for the options of the ixi-UMS Voice-Mail Server.

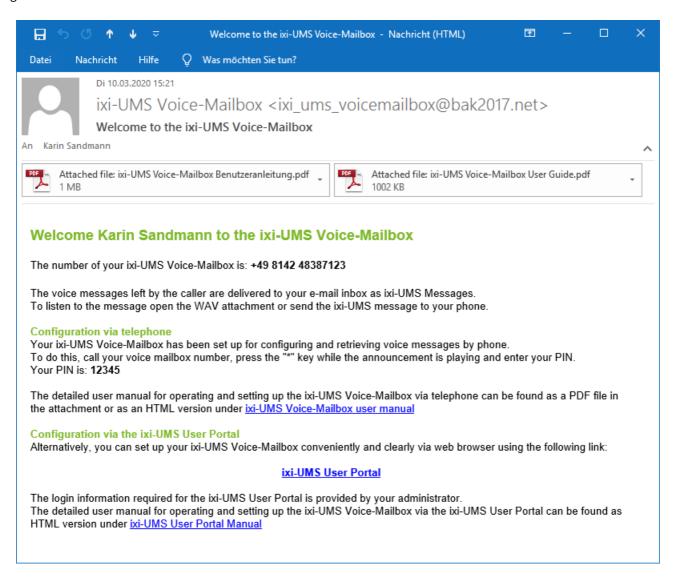
Introduction 7

1.6 ixi-UMS Voice-Mailbox Configuration

From ixi-UMS 7.0 web-based ixi-UMS Voice-Mailbox Configuration is provided by ixi-UMS Portal Server in ixi-UMS User Portal. The ixi-UMS Portal Server can be installed on any computer. Further information can be found in the ixi-UMS Portal Server manual.

The ixi-UMS Voice-Mailbox can be set up over the phone and via a web-based interface. ilformation about the setup can be sent to the user by e-mail. The content of the e-mail depends on the configuration of the ixi-UMS Voice-Mail Servers and the user settings.

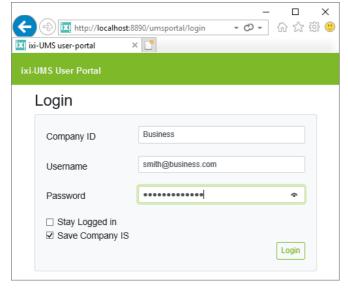
If the link to the ixi-UMS Voice-Mailbox Configuration required for the login is sent to the users by e-mail with the first call, please note that the users must be informed separately about the instance name/company ID to be used and the required login information.

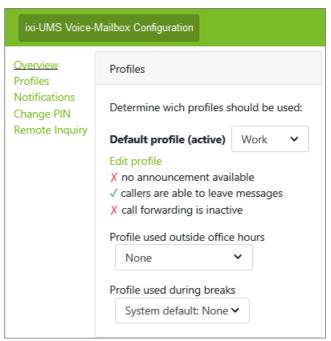


8

If the link is opened, the user must log in with his LDAP account.

The options offered to the user are specified ixi-UMS Portal Server For further information, please refer the manual to the ixi-UMS Voice-Mailbox User Manual.





2 Installation Preparation

Before you start the installation, some things have to be checked and prepared.

Important:

When the first call comes in, the user receives an "ixi-UMS Welcome E-Mail" with his data, the user manual and the link to the browser-based <u>ixi-UMS Voice-Mailbox Configuration</u>.

The ixi-UMS Voice-Mailbox number is read out from the attribute determined at " Welcome Mail". If no number is inserted there, the called number is entered.

The displayed PIN is entered at the user properties. If there is already a PIN deposited there, e.g. from a previous version, the user is informed about it.

If the user shall receive another attachment, this can be changed.

The "Welcome E-Mail" can be switched off in the ixi-UMS Voice-Mail Server configuration.

2.1 Preparing your Messaging System

To be able to access to the mailbox, some settings are required in the mail to servers. According to the mail servers and used users database you see please:

- Preparing Microsoft Exchange 2010
- Preparing Microsoft Exchange 2013/2013/2019
- Preparing Lotus Domino

See also under How To:"IMAP4 Login".

2.1.1 Exchange 2013/2016/2019

The query of messages in an Microsoft Exchange 2013, 2016 or 2019 Server is exclusively supported in combination with Active Directory. The ixi-UMS user properties have to be deposited in the AD.

If another LDAP-data base is used for the storage of the user data, please refer to How To "Advanced LDAP Settings" or "Individual IMAP4 User Log-in".

In order to be able to read out and store the settings of the users, an administrator account is required for the LDAP-access (Active Directory).

With Microsoft Exchange Server 2013/2016/2016, it is possible to use the administrative IMAP4-access "Alias-Login" to all the mailboxes or the "Individual IMAP4 User Log-in".

In order to be able to access the mailboxes of the users via "Alias-Login", a user account must get <u>Full Access to all the Mailboxes</u>.

The ixi-UMS Voice-Mail Server therewith can be installed in a way that the users can listen to their ixi-UMS voice mails via telephone without having to deposit their password. As a result, there are almost no access problems that may arise when setting up a new user.

Moreover, the type of IMAP4-Authentication must generally be set up on the Exchange server.

In order to be able to forward and reply to messages via telephone, the Mailserver must be configured correctly. Please see Relay Enabling for the ixi-UMS Voice-Mailbox

2.1.1.1 IMAP4 Access to all the Mailboxes

In order to allow all the users to access their mailbox by the ixi-UMS Voice-Mail Server, global access rights are recommended. The access must be executed via a domain user, who is not part of a domain-administrative group. For Microsoft Exchange 2013,2016 and 2019, this user needs a mailbox.

estos GmbH recommends the access with an explicitly set up "IMAP-User".

Please enable the administrative access for a domain user by entering the following command line in the "Exchange Administration Shell":

add-adpermission -identity "<DistinguishedName of Mailbox Database>" -user <Domainusername> -AccessRights GenericAll



After having changed the settings, the IMAP4 service must be restarted.

2.1.1.2 IMAP4 Access

In an Microsoft Exchange 2013/2016/2019 organization, the Client Access Server takes care of the authentication of the users. In larger organizations, the settings relevant for IMAP4 thus have to be made at the CAS Servers.

The IMAP4 service has to be started at the CAS Servers.

The transmission of the password for the IMAP4 login is performed in plaintext. The IMAP4 protocol settings have to be changed at the servers accordingly.

Open the Exchange Management Shell on your Microsoft Exchange Server and enter the following command:

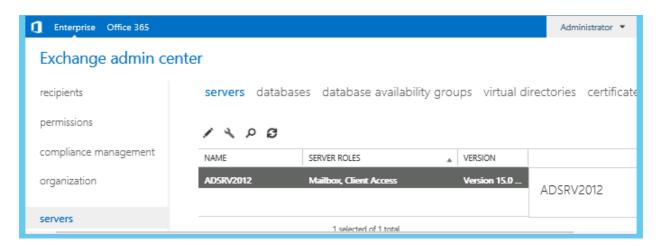
Set-ImapSettings -LoginType PlainTextLogin

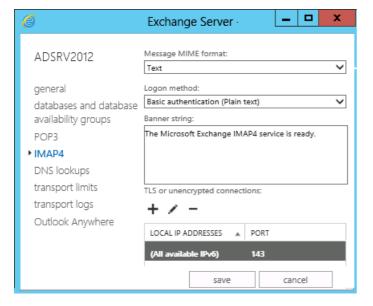


If the powershell had not been started on the CAS Server, the CAS Server has to be stated in addition:

Set-ImapSettings -Server "CAS-Server-Name" -LoginType PlainTextLogin

Alternatively, this setting can also be executed in the Exchange admin center. Navigate to "Server", select the server and click on "edit".





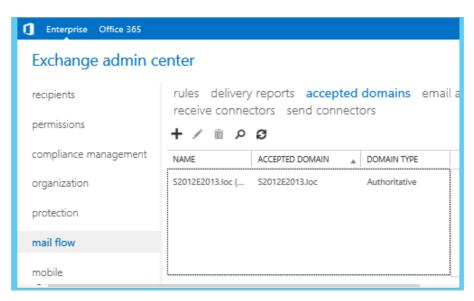
Please open the properties of "IMAP4" at "logon method" and choose "Basic authentication (Plain text)"

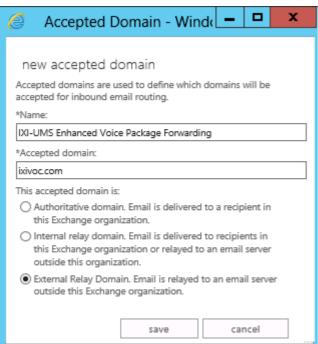
After having changed the settings, the IMAP4 service has to be restarted.

2.1.1.3 Relay Enabling for the ixi-UMS Voice-Mail Server

When the ixi-UMS Voice-Mail Server is installed and the user can access his UMS-messages by telephone, he may have to option to answer or forward the messages. This procedure is a "relaying" for the Microsoft Exchange Server. The domain enabled for the relaying must be enabled explicitly.

Open the Exchange admin center. Select the tab "Accepted Domains" at "mail flow".





Create a "New Accepted Domain" via the +-Button". The "Name" can be freely selected.

As "Accepted Domain", have you to enter exactly the sames as determined in the ixi-UMS Configuration at "<u>Templates</u>".

You have to determine that this is an "External Relay Domain" and confirm with "New".

These entries must be made for all types of messages, that can be forwarded by telephone.

2.1.2 Exchange 2010

The query of messages in an Microsoft Exchange 2010 is exclusively supported in combination with Active Directory. The ixi-UMS user properties have to be deposited in the AD.

If another LDAP-data base is used for the storage of the user data, please refer to How To "Advanced LDAP Settings" or "Individual IMAP4 User Log-in".

In order to be able to read out and store the settings of the users, an administrator account is required for the LDAP-access (Active Directory).

With Microsoft Exchange Server 2010, it is possible to use the administrative IMAP4-access "Alias-Login" to all the mailboxes or the "Individual IMAP4 User Log-in".

In order to be able to access the mailboxes of the users via "Alias-Login", a user account must get <u>Full Access to all the Mailboxes</u>.

The ixi-UMS Voice-Mail Server therewith can be installed in a way that the users can listen to their ixi-UMS voice mails via telephone without having to deposit their password. As a result, there are almost no access problems that may arise when setting up a new user.

Moreover, the type of IMAP4-Authentication must generally be set up on the Exchange server.

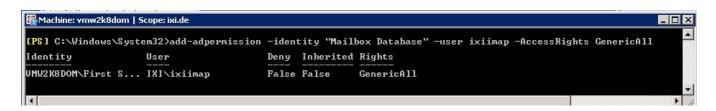
In order to be able to forward and reply to messages via telephone, the Mailserver must be configured correctly. Please see Relay Enabling for ixi-UMS Voice-Mail Server.

2.1.2.1 IMAP4 Access to all the Mailboxes

In order to allow all the users to access their mailbox by the ixi-UMS Voice-Mail Server, global access rights are recommended. The access must be executed via a domain user, who is not part of a domain-administrative group.

Please enable the administrative access for a domain user by entering the following command line in the "Exchange Administration Shell":

add-adpermission -identity "<DistinguishedName of Mailbox Database>" -user <Domainusername> -AccessRights GenericAll



After having changed the settings, the IMAP4 servicees must be restarted.

2.1.2.2 IMAP4 Access

In an Microsoft Exchange 2010 organization, the Client Access Server takes care of the authentication of the users. In larger organizations, the settings relevant for IMAP4 thus have to be made at the CAS Servers.

The IMAP4 service has to be started at the CAS Servers.

The transmission of the password for the IMAP4 login is performed in plaintext. The IMAP4 protocol settings have to be changed at the servers accordingly.

Open the powershell on your Microsoft Exchange 2010 Server and enter the following command:

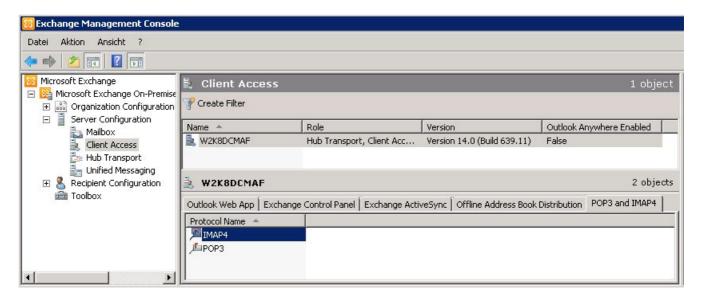
Set-ImapSettings -LoginType PlainTextLogin

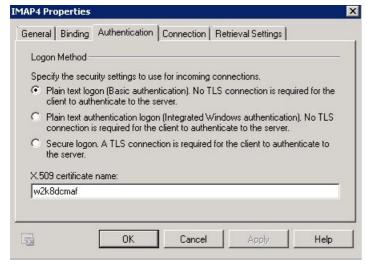


If the powershell had not been started on the CAS Server, the CAS Server has to be stated in addition:

Set-ImapSettings -Server "CAS-Server-Name" -LoginType PlainTextLogin

Alternatively, this setting can also be executed in the Exchange System Manager.





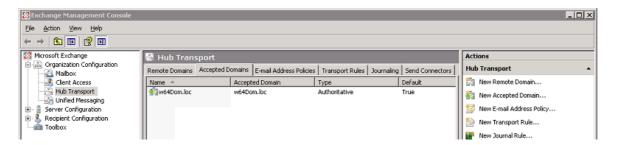
Please open the properties of "IMAP4" at "Authentication" and choose "Plain text logon ..."

After having changed the settings, the IMAP4 service has to be restarted.

2.1.2.3 Relay Enabling for the ixi-UMS Voice-Mail Server

When the ixi-UMS Voice-Mail Server is installed and the user can access his UMS-messages by telephone, he may have to option to answer or forward the messages. This procedure is a "relaying" for the MS Exchange Server. The domain enbaled for the relaying must be enabled explicitly.

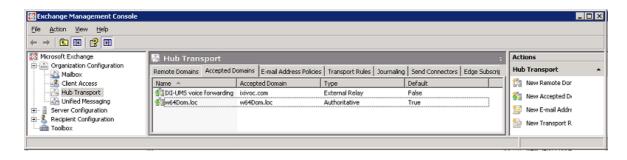
Open the Exchange Management Console. Select the tab "Accepted Domains" at "Organization Configuration - Hub-Transport".



Create a "New Accepted Domain" via the window "Actions". The "Name" can be freely selected. As "Accepted Domain", have you to enter exactly the sames as determined in the ixi-UMS configuration at "Templates".



You have to determine that this is an "External Relay Domain" and confirm with "New".



2.1.3 Lotus Domino

The query of messages in an Lotus Domino Server is exclusively supported in context with the Domino User Administration. The ixi-UMS User Properties must be deposited in the LDAP data base of the Domino Server.

If another LDAP-data base is used for the storage of the user data, please refer to How To "Advanced LDAP Settings" or "Individual IMAP4 User Login".

In order to allow mobile access to users' mailboxes, you have to configure the following standard protocols:

- SMTP (mail delivery between messaging server
 ⇒ ixi-UMS Kernel)
- LDAP (user management)
- IMAP (access to user's mailbox)

The first and second task (SMTP, LDAP) should already be configured because of the ixi-UMS Mail Server Connector installation. However, this configuration will be explained step by step.

In most cases, the IMAP task should be unconfigured. We also provide a step by step instruction for this configuration.

Note:

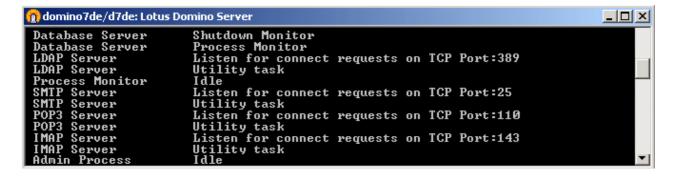
- 1. Lotus Domino does not support "IMAP-Reveralls". When the inboxes are distributed to several Lotus Domino servers, the respective server must be entered at every user.
 - Moreover, the stated account must have full access to the mailboxes on both servers for the "administrative" account.
- 2. SMTP, LDAP and IMAP in Lotus Domino Server terms are Internet Protocols. Therefore, Internet passwords are used, if needed.
 - If have not used Internet passwords so far, you have to set them up now. You can use imaginary passwords (set by e.g. an agent). You only have to know the password for the IMAP "master account" and LDAP user.
- 3. If you use Lotus Domino in a cluster configuration, please consider the following situations:
 - As clustered Domino Servers cannot be reached at one IP-address (every one has its own), ixi-UMS is not working any
 more if the Domino Server stated in the ixi-UMS Voice-Mail Server configuration fails.
 - Although configuration changes should be replicated very fast to the backup server in cluster configurations, our expirince tells us that it is not the way it should be. This is why you should also perfom configuration changes on your backup server.
 - It may make sense to use your backup server for ixi-UMS LDAP and IMAP requests. Your productive resources then are not bound by ixi-UMS.
- 4. In order to use ixi-UMS IMAP queries, you have to create a fulltext index for mobile enabled mailboxes. Please consider: A fulltext index exhausts hard disk free space on your Lotus Domino Server.

2.1.3.1 General

The commands for the contol of services / tasks is described in the following. The commands are valid for SMTP, IMAP and LDAP.

2.1.3.1.1 Task Status and Ports

The command "show task" displays all running Domino tasks. Here you can see whether the SMTP listener task is up and on which port.



2.1.3.1.2 Starting and Stopping Services

All tasks can be controlled via the "Console".

Required for:	The Tasks	
message transfer and message routing	Router	
	SMTP	
search / write user properties	LDAP	
access users' mailboxes (remote inquiry)	IMAP	

Some commands are described in the following that are required for the implementation of ixi-UMS.

Command	Action
load <task></task>	starts a task (service)
tell <task> q</task>	stops a task
restart task <task></task>	restarts a task 7 service

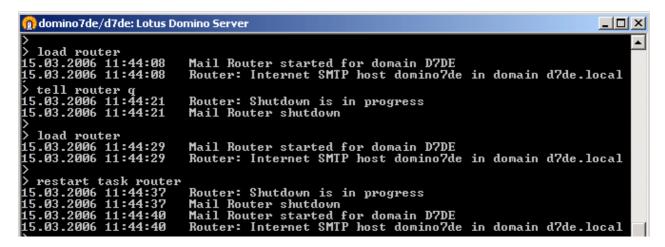
Example:

load router

Starts the router task if not started yet. When the router task has already been started, an error message appears.

- tell router q (tell router quit) Stops the router task.
- restart task router

Restarts the router task. This is a very useful command when forcing configuration changes.



Note: Stopping and restarting from task may take a while.

2.1.3.1.3 Force Configuration Changes

In order to force configuration changes it is recommended to restart the task You can find more information about this topic in "Start, Stop, Restart".

2.1.3.2 SMTP

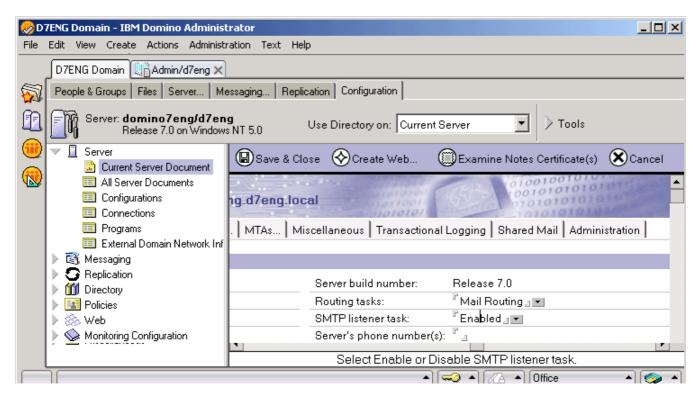
The SMTP-Listener-Task is used for receiving SMTP e-mails.

If you have a default installation, the SMTP-Listener-Task of the Domino 7 Server is enabled.

However, the enabling of the SMTP-Listener-Task must be executed in the context with the installation of the ixi-UMS Domino Connector, anyway.

2.1.3.2.1 Enable SMTP Listener Task

If the SMTP listener task is not enabled so far, you will have to enable the task now. If the SMTP listener task is configured like shown below, the SMTP listner task is entered automatically in the "notes.ini" of the server. As a result, the SMTP listener task is started as well when you restart your IBM Lotus Domino Server.



2.1.3.3 LDAP

LDAP is used to request ixi-UMS user properties stored in IBM Lotus Domino Names and Address Book. In order to do so, LDAP task must be started.

In addition, LDAP task has to be configured correctly.

ixi-UMS stores e.g. numbers of incorrect PIN re-entries in IBM Lotus Domino person document. LDAP write permision must be granted for this.

If there is no possibility for write permission, please see How To "Save User Data in File System" for more information.

2.1.3.3.1 Permanently Starting LDAP Task

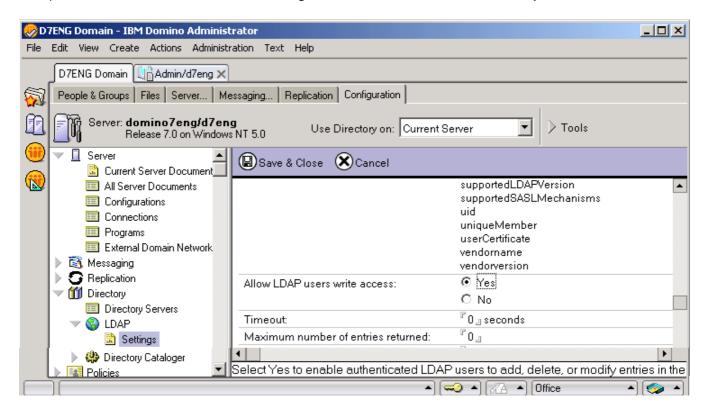
In order to start the LDAP task permanently - also if IBM Lotus Domino Server is restarted -, you have to add LDAP task in "notes.ini" in "ServerTasks" line like shown below.

```
Datei Bearbeiten Format ?

DefaultMailTemplate=mail7.ntf
Preferences=32
ServerTasks=Update, Replica, Router, AMgr, AdminP, CalConn, Sched, IMAP, LDAP, POP3, RNRMgr
ServerTasksAt1=Catalog, Design
ServerTasksAt2=UpdAll
ServerTasksAt3=Object Info -Full
ServerTasksAt5=Statlog
```

2.1.3.3.2 LDAP Configuration

When you start the LDAP configuration for the fist time, an IBM Lotus Domino configuration document is created first. The option "Allow LDAP users write access" enables general write access to the Domino directory.



IBM Lotus Domino is verifying every write operation via LDAP with schema rules. In order that ixi-UMS can store the user settings in the Domino directory with ixi-UMS, this check has to be switched off. For that, please set the option "schema checking" to "No".

Please note: A warning appears which must be answered with "No". If it is not, ixi-UMS will not be able to write to Domino directory.



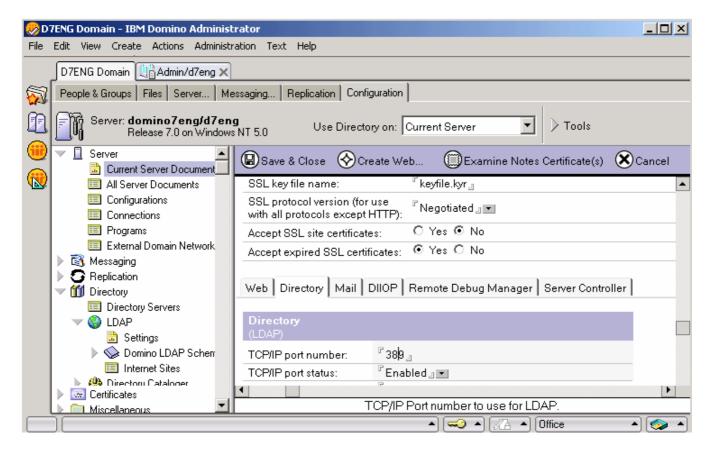
After configuration, please force configuration change by restarting LDP task via IBM Lotus Domino Console.

If there is no possibility for write permission, please see How To "Save User Data in File System" for more information.

2.1.3.3.3 Change LDAP Port

If IBM Lotus Domino Server is installed on a machine on that a Microsoft Active Directory (AD) is located, you cannot use LDAP standard port (port 389).

Therefore, you have to change IBM Lotus Domino LDAP port in Current Server Document.



2.1.3.4 IMAP

IMAP is used to access users' mailboxes via IMAP protocol.

Since IBM Lotus Domino 6, a so-called "master account" (compare Microsoft Exchange) is used for this approach. In ordert to make this possible, some changes at

- IMAP configuration document
- users' mailboxes
- "master account"

must be performed.

Note:

In order to use ixi-UMS IMAP queries, you have to <u>create a fulltext index</u> for mobile enabled mailboxes. Please note: A fulltext index exhausts hard disk free space on your IBM Lotus Domino Server.

2.1.3.4.1 Permanently Starting IMAP Task

In order to start the IMAP task permanently - also if Lotus Domino Server is restarted -, you have to add IMAP task in "notes.ini" (serversite) in "ServerTasks" line like shown below.

```
Datei Bearbeiten Format ?

DefaultMailTemplate=mail7.ntf
Preferences=32
ServerTasks=Update,Replica,Router,AMgr,AdminP,CalConn,Sched,IMAP,LDAP,POP3,RnRMgr
ServerTasksAt1=Catalog,Design
ServerTasksAt2=UpdAll
ServerTasksAt3=Object Info -Full
ServerTasksAt5=Statlog
```

2.1.3.4.2 IMAP Configuration

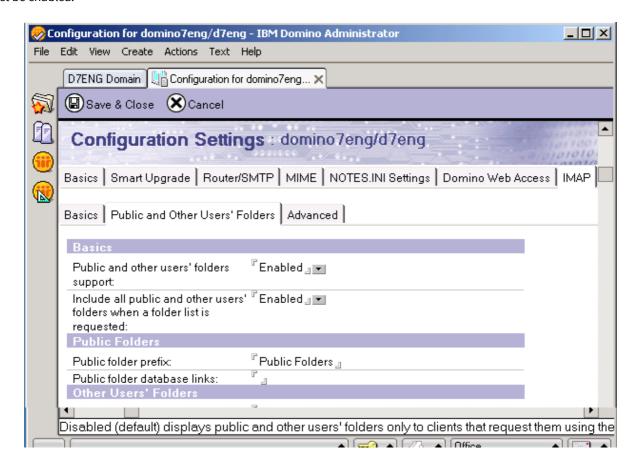
In order to access users' mailboxes, ixi-UMS uses the so-called "namespace" feature of an IMAP server. With Domino, this feature is enabled by setting option

• Public and other users' folders support

In addition to that, the option

• Include all public and other users' folders when a folder list is requested

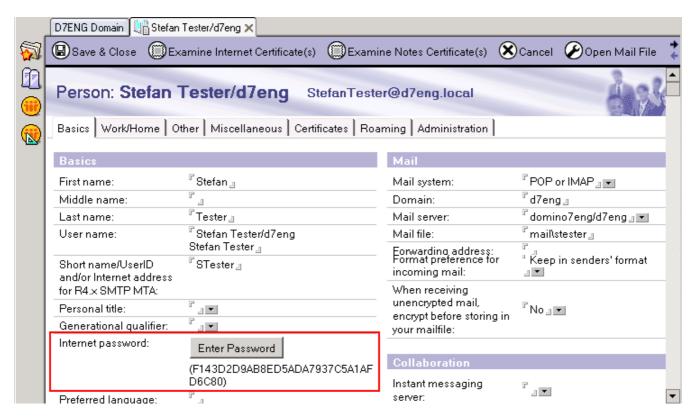
must be enabled.



2.1.3.4.3 Enable Mailbox for IMAP Access

For full functionality of the solution, the IBM Lotus Domino person document must be configured like shown below.

- Mail system to POP or IMAP
- an Internet password must be assigned
- an Internet address must be assigned



With

• load convert -e <mailbox directory>\<mailboxname>.nsf

the mailboxes are converted and enabled for IMAP. You can find more information about this topic in the IBM Lotus Domino Administrator manual.

```
domino7de/d7de:Lotus Domino Server

| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino Server
| Omino7de/d7de:Lotus Domino S
```

• load convert -e mail\stester.nsf

Mailbox with name "stester.nsf" is converted

• load convert -e mail*.nsf

All mailboxes in directory mail are converted

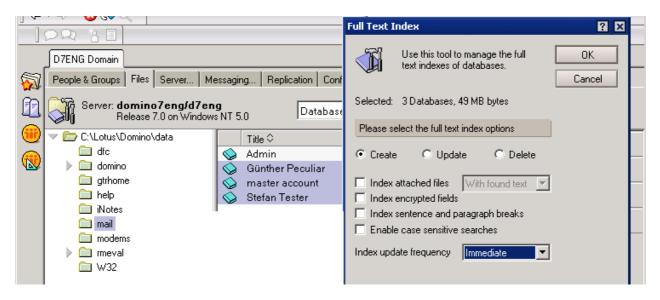
Note: If you do not use Microsoft Window OS, you have to substitue "\" by "/". (Example: "load convert -e mail/*.nsf" on Unix)

2.1.3.4.4 Mailbox Full Text Index

A full text index must be created for every mobile enabled mailbox in order to receive correct results on IMAP queries.

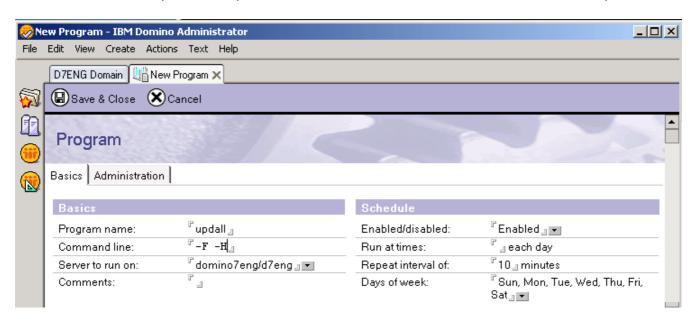
Note: In order to use ixi-UMS IMAP queries, you have to create a fulltext index for mobile enabled mailboxes. Please note: A fulltext index exhausts hard disk free space on your IBM Lotus Domino Server.

The full text index should be updated every time a new messages is delivered to the mailbox. For this reason, "index update frequency" should be set to "immediate".



Pleas note that not all Domino versions - especially older versions - work as expected, even though all settings are configured correct. As a matter of this, not all actually present messages are sent by ixi-UMS. In this case, the full text index must be updated like shown below.

More information about "updall" and its parameters can be found in the IBM Lotus Domino Administrator help.



2.1.3.4.5 Allowing Access to Own Mailbox

There are 2 ways to allow the "Mobile Account" access to the mailboxes:

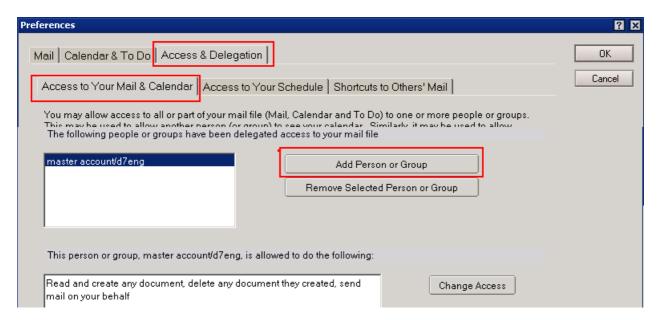
- 1. User allows mobile access to own mailbox
- 2. Adjusting mailbox ACL by the administrator

In variant 1 displayed here, every user can decide on his own whether he wants to grant the access to his mailbox. If the mobile access shall be allowed, the user has to entitle the Master Account access to the own mailbox.

In order to allow access, the user has to go to his mailbox and choose "Tools" - "Preferences".

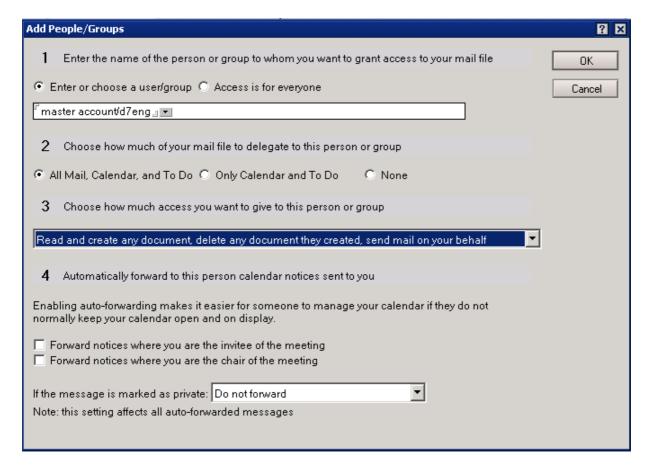


Go to Tab "Access & Delegation" and "Access to Your Mail & Calendar". With "Add Person or Group", you have to add the "master account" used for ixi-UMS. You can also check the effective permissions of a user on your mailbox when you mark the respective user. Effective rights are shown in the small field at the bottom of the window.



With "Add Person or Group", you go to the dialogue box. You can choose a user ("master account") and change access rights on your mailbox.

- 1. Choose "master account"
- 2. Permission for "All Mail, Calendar, and ToDo"
- 3. Choose the highest permission possible.
- 4. No relevance for ixi-UMS



Remark:

It is not possible to grant rights for deleting messages.

As a matter of this, it is not possible to delete messages via ixi-UMS mobile access.

If you want to delete messages via ixi-UMS mobile access, please refer to the chapter "Adjusting mailbox ACL".

2.1.3.4.6 Adjusting Mailbox ACL

There are 2 ways to allow the "Mobile Account" access to the mailboxes:

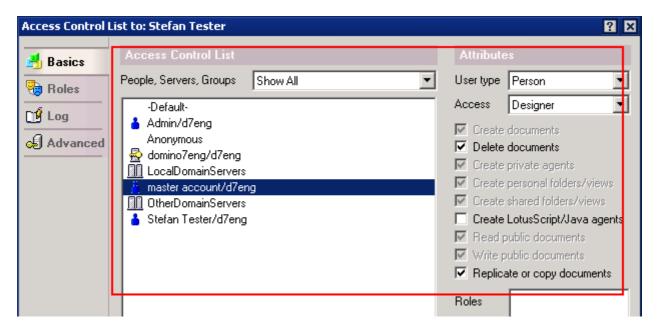
- 1. <u>User allows mobile access to own mailbox</u>
- 2. Adjusting mailbox ACL by the administrator

In the variant 2 displayed here, higher permissions on the mailbox of the user are granted that the user can adjust himself. By this, messages can also be deleted by mobile access.

How the user himself can grant permissions (except for the deletion of the messages) is shown in "<u>User grants mobile access</u> to own mailbox".

Note: If you use the approach shown below, it is not necessary that users also grant access to their own mailbox - compare "Granting access to own mailbox".

Only via IBM Lotus Domino Administrator it is possible to grant the "master account" the right to delete messages in other users' mailboxes. Please set the ACL on user's mailbox like shown below.



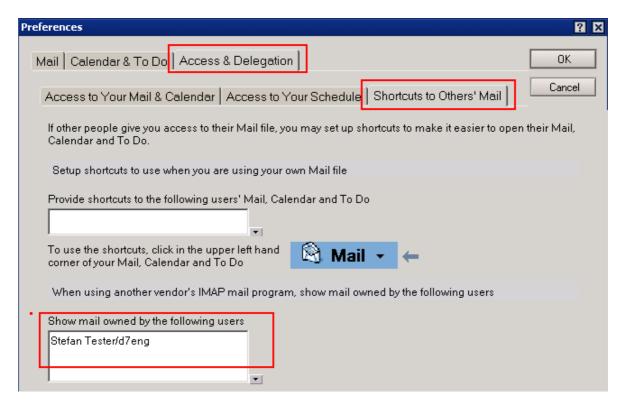
2.1.3.4.7 Configure "Master Account" IMAP Access

User mailboxes must be included in the "master account" mailbox. Please perform the following steps:

• Change to "master account's" mailbox and choose "Tools" - "Preferences"



- Go to "Access & Delegation" and "Shortcuts to Others' Mail"
- By adding users to "Show mail owend by the following users", ixi-UMS mobile access is enabled.



2.1.3.4.8 Check IMAP Qccess with MS Outlook Express

The easiest way to check if and how other users' mailboxes are shown in the "master account" mailbox is Microsoft Outlook Express.

The screenshot below shows the successful and correct integration of "Stefan Tester's" mailbox into "master account's" mailbox.



If the result you get does not look like the one above, please refer to "Force configuration changes".

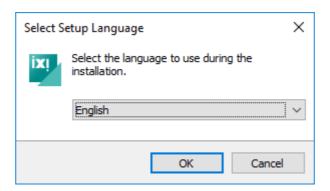
3 Installation

During the installation process, some information about the mail server and the LDAP-data base is needed. Moreover, the mail server may have to be configured for the IMAP4 access.

Please observe the setting instructions for the mail server you are using.

3.1 Select Language

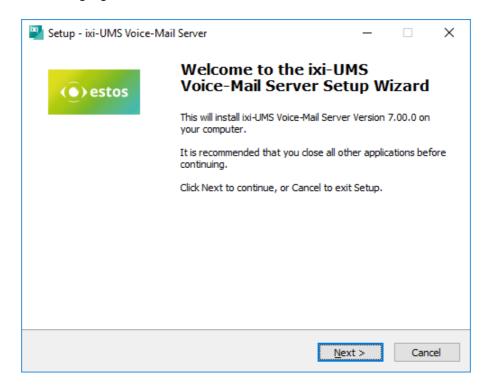
First you must determine the installation language.



The "Default language" for the users is independent of that und can be changed in the MMC later on separately.

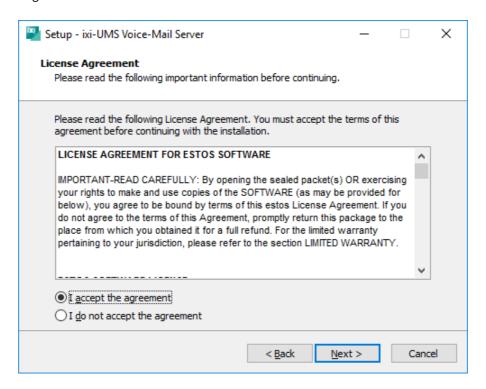
3.2 Welcome

After having determined the language, the installation is started.



3.3 License Agreement

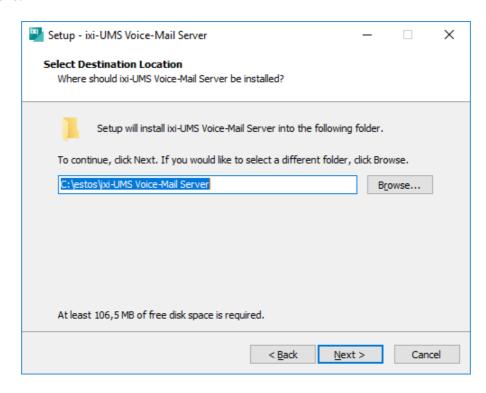
The end user's licence agreement is indicated.



Peruse this carefully and choose "I accept..."
Only then the installation can be continued.

3.4 Select Destination Location

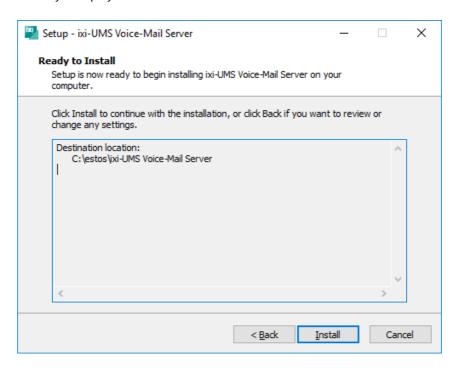
After that, you have to determine the installation path. The default path is a path on the directory level of the ixi-Framework installed beforehand.



By default, the ixi-UMS Voice-Mail Server is installed in the same folder as the ixi-Framework.

3.5 Ready to Install

Before the copying, a summary is displayed.



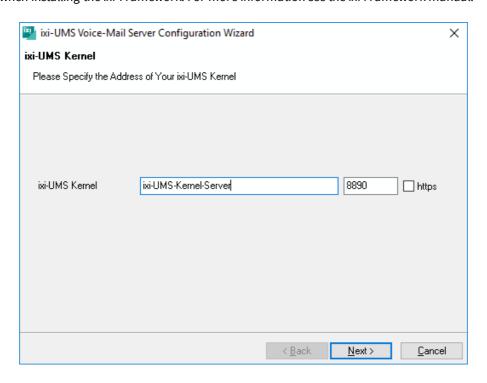
By clicking on the button "Install", the installation is started.

All the required files are copied. The required configuration is started by means of a wizard after that.

3.6 ixi-UMS Kernel

This window only appears if the ixi-UMS Kernel is not installed on the server.

The IP address or the name of a ixi-UMS Kernels located in the network must be entered to be able to query the license. The connection is established via HTTP or HTTPS. Protocol and port can be entered HTTPS must have been set up on the ixi-UMS Kernel computer when installing the ixi-Framework. For more information see the ixi Framework manual.



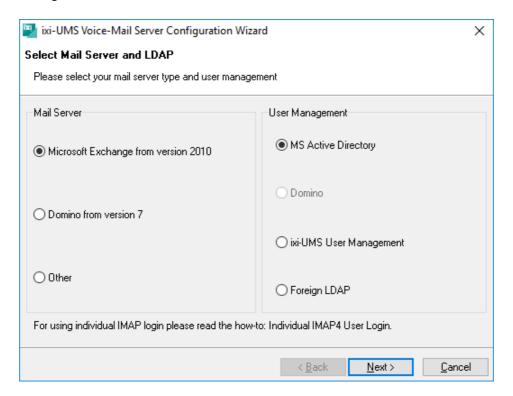
If the ixi-UMS Kernel cannot be reached, a respective message is appears.

3.7 Select Mail Server and LDAP

First of all, the information about the mail server and the LDAP server is queried. Depending on which mail server is chosen, different LDAP servers are available for the user management.

Depending on this choice, the imap Access for the mailbox access is carried out.

The settings can be changed in the MMC later on.



IMAP access to the mailboxes is required for users to be able to query their voice mailbox on the phone.

If the LDAP user management is independent of the mailboxes in the mail server, the LDAP attribute in which the mailbox name is used to identify the user mailbox must be specified in the further course of the setup. The settings can be changed in the configuration after installation.

Remark

Only combinations that are supported by ixi-UMS can be chosen. Some combinations cannot be defined via standardized accesses.

Example:

User management in "ixi-UMS User Management" or "Foreign LDAP" and

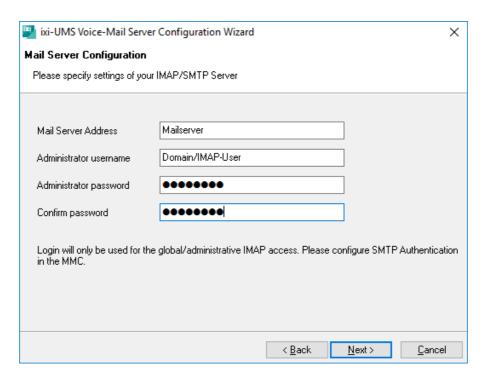
- mail server type Domino from version 7

In this case, "Foreign" has to be chosen as mail server. The respective LDAP-fields for the query have to be entered in the ixi-UMS Voice-Mail Server configuration subsequently. Please rever the How To: Advanced LDAP-Settings.

3.8 Mail Server Configuration

In a next step, the connection data to the mail server are queried.

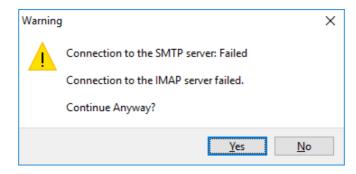
The IP-address of a mail server has to be entered. In the MMC, the IP-address for IMAP and SMTP can be administered separately later on. Since MS Exchange 2007, the CAS Server has to be entered as IP-address.



Moreover, the <u>Account for the IMAP access</u> as well as the accompanying password can be entered. By default, the installation account is entered here.

The administrator and password specifications are is not required to continue the setup.

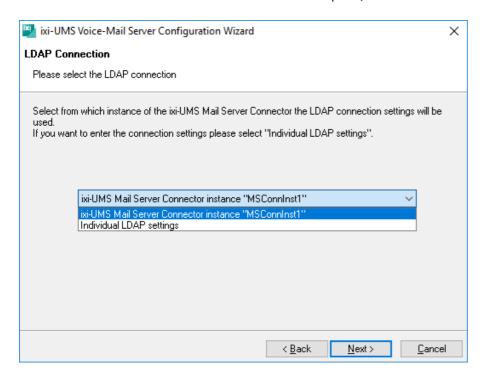
By clicking on the button "Next", a connection test to the IMAP- and SMTP Server are executed each and a respective message is created. This procedure may take 1 - 5 minutes.



The installation can be finished even if the connection could not be established successfully.

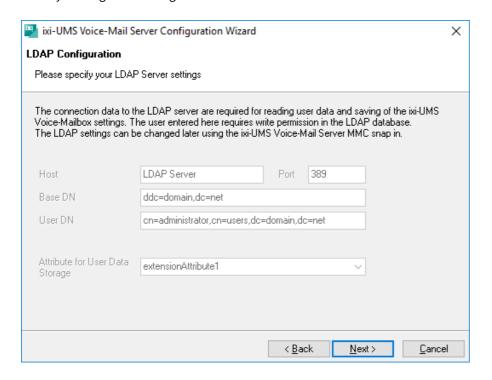
3.9 LDAP Configuration

If an ixi-UMS Mail Server Connector is installed on the computer, the LDAP connection data can be used.



If no ixi-UMS Mail Server Connector is installed or if you want to enter the data manually, select "Individual LDAP settings".

The next page depends on the selection under "Select Mail Server and LDAP" and whether "Individual LDAP settings" or an already existing LDAP setting has been selected.

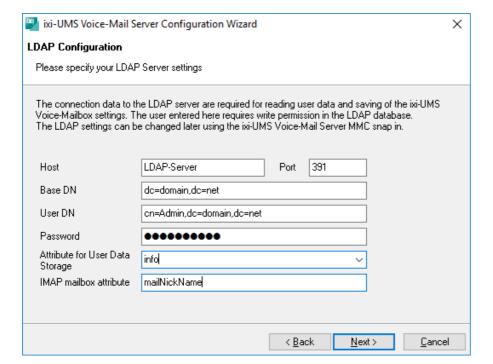


If a valid LDAP/mail server combination and the instance of an installed ixi-UMS Mail Server Connector have been selected under "Select mail server and LDAP", the connection data is displayed readonly and can be changed later in the MMC if required.

If "Foreign LDAP" was selected under "<u>Select Mail Server and LDAP</u>", the "IMAP Mailbox Attribute" must always be specified.

In the **IMAP Mailbox Attribute** the attribute must be entered in which the "Alias" = mailbox name is located. The attribute is required for the users to be able to query their voice-mailbox on the phone.

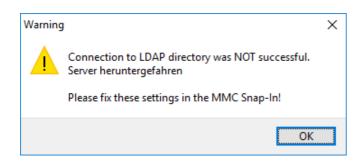
If "Individual LDAP Settings" is selected, you must enter the connection data to the LDAP database.



If a related LDAP/Mail Cerver combination has been selected under "Select mail server and LDAP" and the instance of an installed ixi-UMS Mail Server Connector has been selected, the connection data is displayed readonly and can be changed later in the MMC if necessary.

If "Foreign LDAP" was selected under "<u>Select Mail Server and LDAP</u>" , the "IMAP Mailbox Attributes" must always be selected.

Click on "Next", and the connection to the LDAP Directory is checked.



If no connection could be established, a respective message is displayed.

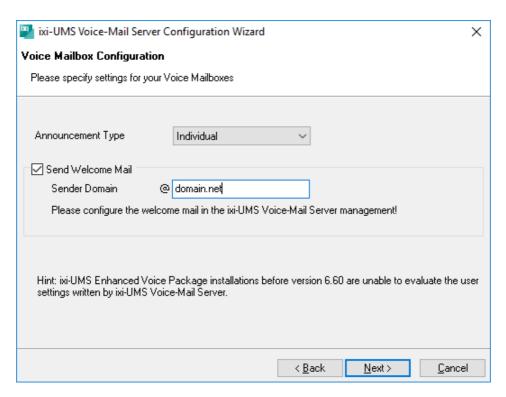
However, the setup can be continued.
All the data can be changed in the MMC later on.

3.10 Voice Mailbox Configuration

The "Announcement Type" can be chosen here. This setting is valid as long as the user has not got any explicit settings and can be changed in the MMC.

- Individual The user can deposit an own announcement text
- **Personalized** The user can only deposit his name

If the users shall get a welcome mail and an individually generated PIN with the first call, the local domain has to be entered here in order to avoid problems with the delivery to the mail server. The setting <u>can be changed</u> later in the ixi-UMS Voice-Mail Server configuration.



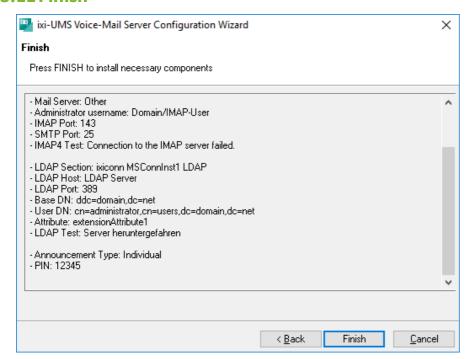
The "Default PIN" is only valid if the delivery of the welcome mail and therewith the providing of an individual PIN is deactivated.

The PIN length or default PIN can be changed at any time under "Default User Settings - Login by Phone" later

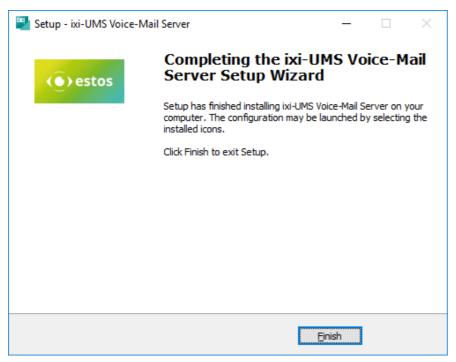
Note

With ixi-UMS Enterprise 6.60 the encryption of the PIN and the IMAP password for the Individual login at the mail server is increased. Only ixi-UMS Enhanced Voice Packages version 6.60 or higher and the ixi-UMS Voice-Mail Server are supported. Please note that the ixi-UMS Voice-Mailbox tab in the Active Directory must also be renewed.

3.11 Finish

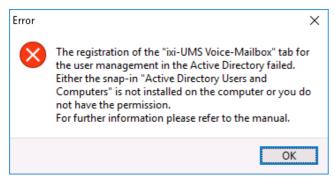


At the end, a summary of the settings made at the setup are displayed.



When all the components are installed and configured, the setup can be exited by clicking on "Finish".

When the setup was executed at a server and as Mailserver/LDAP was "Exchange"AD" selected, the "ixi-UMS Voice-Mailbox" tab for the user management is registered now.



If no "Active Directory user and computer" Snapln is installed on the server or the access rights are not for the registration of the Tab "ixi-UMS Voice-Mailbox" enough, an announcement appears:

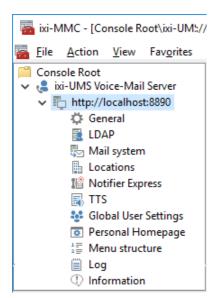
Register in the case the "ixi-UMS voice-mail" Tab on another server or check the authorisations.

36 Installation

4 ixi-UMS Voice-Mail Server Configuration

After the installation, the ixi-UMS Voice-Mail Server can be configured via a snap-in in the Microsoft Management Console (MMC).

Please open the Microsoft MMC and add the ixi-UMS Voice-Mail Server Snap-In.



For additional information for the use of the ixi-UMS MMC, please refer to the How To:

Changing MMC Language Register MMC on Another Machine Establish SnapIn-Connection with ixi-UMS Component

4.1 General

Here you can modify commonly used settings.

4.1.1 Welcome Mail

Here you define whether users receive a "welcome message" when the ixi-UMS phone number assigned to them is called for the first time. The welcome message will contain the UMS number, the new PIN and the link to the browser-based ixi-UMS User Portal. If the user has already entered a PIN in the LDAP database, this PIN is read out and transmitted to the user. Regardless of the content of the welcome message selected under "E-Mail", the content will also change depending on the user's settings. Example: If the user or global setting "Remote login on the phone" is deaktivated, no PIN will be sent to the user.

The content and attachments of the welcome message can be changed / adjusted.

If **no** welcome message is sent, the PIN assigned in the setup or stored in the global user settings is valid.

If a welcome message is to be sent, you must define what it should contain and as which attributes the required data should be read.

Installation 37

E-Mail

Sender

To avoid problems with sending mail to the mail server, a **sender address** with the internally valid e-mail domain should be specified as the sender e-mail. Optionally a **display name** can be entered.

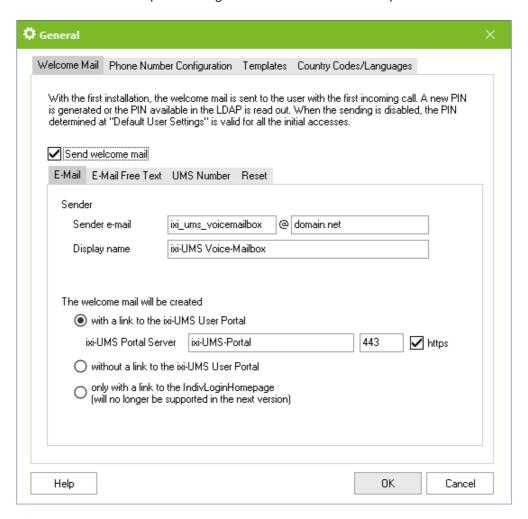
Content of the welcome message

It must be specified what content the welcome message should contain in addition to the PIN and phone number:

- The link to the ixi-UMS User Portal
 The ixi-UMS User Portal must be provided and configured by means of ixi-UMS Portal Server.
 The required logon data must be sent to the users separately.
- No link to the portal server

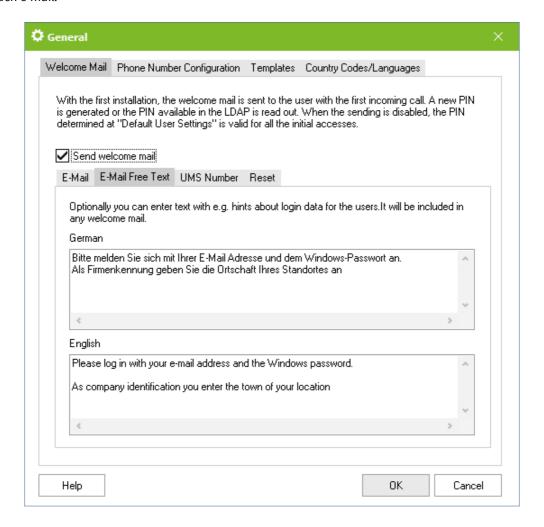
 The users only get the information how to log in on the phone to set up the ixi-UMS Voice-Mailbox.
- The link to the "IndivHomepage"

 This web page for entering the IMAP password (only required for requesting ixi-UMS messages over the phone) is only available in this ixi-UMS version. The input of the login data for mail servers can be provided in the ixi-UMS User Portal.



E-Mail Free Ttext

With the "free text", users can be given any information in the welcome email. The text entered here will be inserted at the bottom of each e-mail.

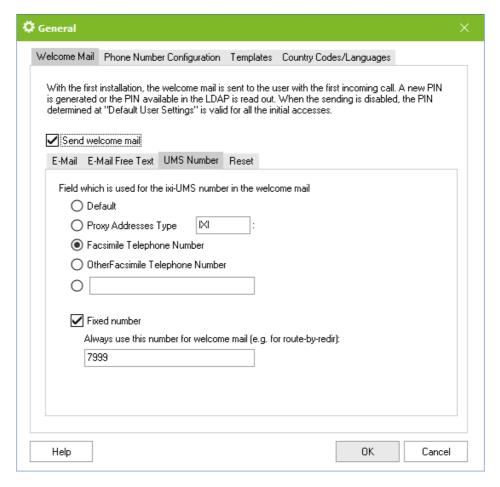


UMS Number

It can be specified from which LDAP field the **UMS number for the welcome message should be read**. In the default setting the LDAP field "facsimileTelephoneNumber" is searched first and then the field "proxyAddresses=IXI:".

A change of the default setting **is mandatory if**, for example, a fax number is entered in the LDAP field "fax number", but the deviating ixi-UMS Voice-Mailbox number is maintained in the e-mail address.

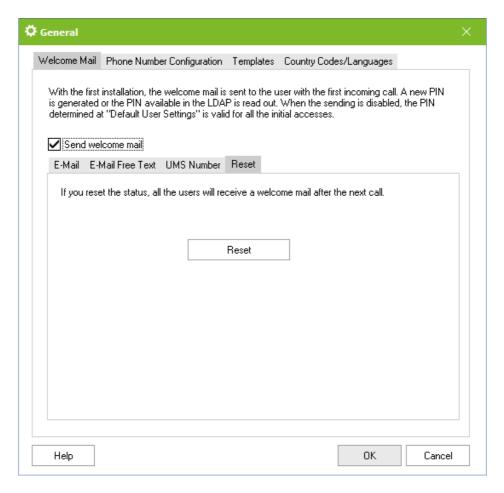
If this specification is not made, problems with recording and playing back greetings may occur when using the ixi-UMS Voice-Mailbox Configuration.



If "Route-by-Redir" is used, the "Fixed telephone number" must also be entered. This will be entered as "Voice Box Number" in the welcome message. For further settings, please see in How To - Route-By-Redirection.

Reset

The button "Reset welcome message" can be used to re-send the e-mail for **all users**. The welcome message is then resent the next time the user calls the user mailbox.



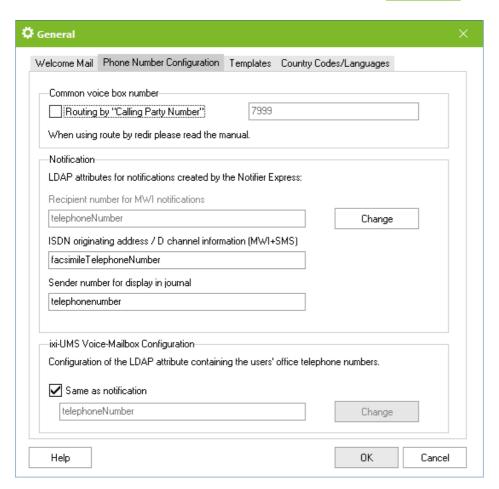
If only individual users should receive the welcome mail again, this can be reset at the user object.

4.1.2 Phone Number Configuration

For the flawless functioning of some of the features, the correct assignment of the phone numbers to the users is required.

Common voice box number

If "Route-by-Redirection" is used for the feature, this feature must be activated and the number set up at the ixi-UMS Kernel must be entered. The common number should also be entered in the <u>Welcome Mail</u>.



The number entered here is sent as MWI-sender number by default.

If another number shall displayed at the user's telephone, this must be <u>entered at the user</u>.

In order that the users can record and play their announcements via the Mobile Personal Homepage, please note the remarks at How To - Route-by-Redirection.

Notification

By default, the MWI signal to be set is sent to the phone number entered in the User Manager under General - Phone Number (LDAP attribute "telephoneNumber"). If the required phone number is in a different field, another attribute can be specified under "*Recipient number for MWI notification*". In this field the phone number to which the signal is to be sent must then be entered for each user.

Under "ISDN originating address" the attribute containing the fax/UMS recipient number must be entered. This is then sent to the PBX as sender information when an MWI or SMS notification is created by Notifier Express. The specified attribute must have a phone number from the phone number range connected to the ixi-UMS Kernel. If the ixi-UMS server with Route-by-Redirection is used, the "Route-by-Redirection" number is sent.

In order to determine in the ixi-UMS Kernel Journal for which user the notification was created, an attribute with a unique phone number must be specified under "**Sender number for display in journal**".

ixi-UMS Voice-Mailbox Configuration

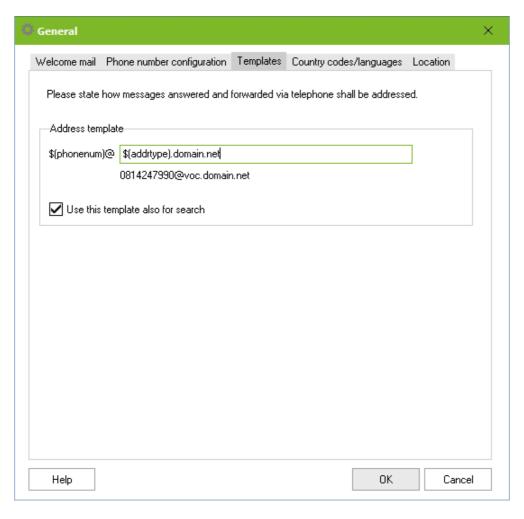
In order to be able to record announcements for your mailbox via the ixi-UMS Voice-Mailbox Configuration, the call number of the office telephone has to be read out with the login or the user requires the authorization to specify a telephone number (set in the ixi-UMS Portal Server).

By default, the number in the LDAP-field "telephoneNumber" is read out. The number should be deposited in the format +49 30 56889654.

If the number of the office telephone is not in this LDAP-field, if the stated number cannot be dialed from internally or is deposited in a "not valid" form (e.g. +49 (030) 56889654), another field can be stated for the LDAP-search.

4.1.3 Templates

In order to be able to forward and answer messages with ixi-UMS by phone the addressing must be consistent with the routing entered in the mail server and the <u>Relay-Enabling</u>, if necessary. The entries are read out of the data of the installed ixi-UMS Mail Server Connector during the setup.



By default, the sender as stated above is searched with the remote inquiry of messages.

In rare cases, the e-mail sender in the incoming message can have been changed by "rerouting" of the mail servers. In this case, the "template for search" must be adjusted manually.

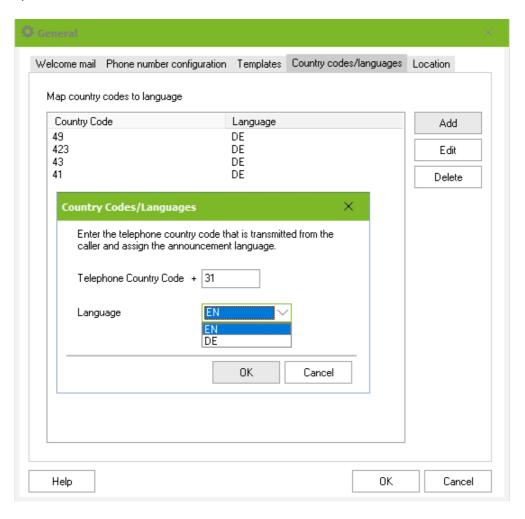
Please contact ixi-UMS support department in cases like that.

Please take care that the address templates in the ixi-UMS Mail Server Connector always match with that in the ixi-UMS Voice-Mail Server.

Please check the routing entries in your mail server.

4.1.4 Country Codes / Languages

Here you can deposit assignments of country codes to the announcement language for the setting "Announcement depending on the phone number of the caller".



Via the button "Add", the language German or English can be assigned to another telephone country code.

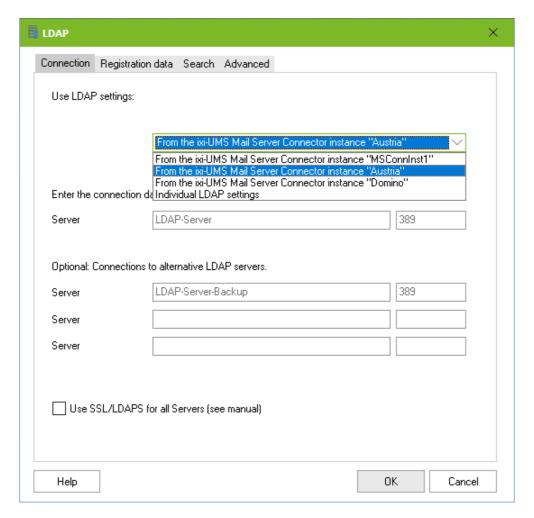
4.2 LDAP

The LDAP settings of the installed ixi-UMS Mail Server Connector are taken over by default. Only in special cases, the configuration may differ and must be changed subsequently.

4.2.1 Connection

The LDAP connection data could be taken from an instance of the ixi-UMS Mail Server Connector when installing the ixi-UMS Voice-Mail Server.

If the LDAP settings or the **Search string** shall differ from the ixi-UMS Mail Server Connector settings, you can switch over to "Individual LDAP settings" and type in the connecttion data.



Optional: Connection to alternative LDAP-Server

If the first LDAP-server is not available, the query on the optional next one is started.

The query on the next server is executed until either this server is no longer available or the "ixi-Apache service" is restarted.

Please note that the connection MUST be established via LDAP, as a write-access is required.

All the servers must be domain controllers / LDAP-data base servers of the **same domain** on the same level.

If the communication with the LDAP-server shall be encrypted, please take care when entering the servers, that they correspond with the certificate. See also "How To - Certificates".

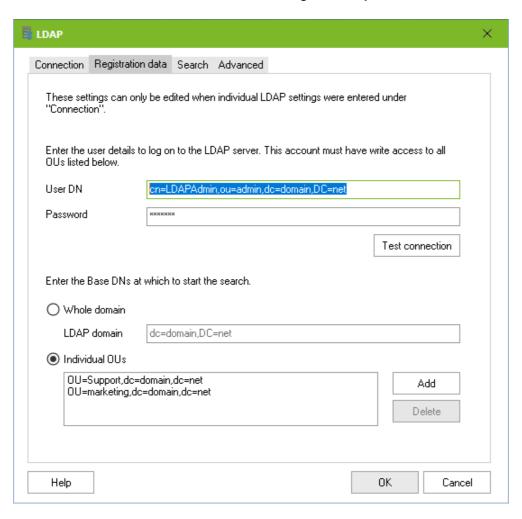
4.2.2 Registration Data

These settings can only be edited when "individual settings" were selected under "Connection"

The user entered here needs write permissions on the **UMS Attribute Field**, as the settings of the users (e.g. PIN) are stored in this field. You do not have to enter the same accountas for the IMAP access.

If these permissions are not granted to the account of the ixi-UMS Mail Server Connector "individual settings" must be selected on the tab "Connection" and the user must be entered.

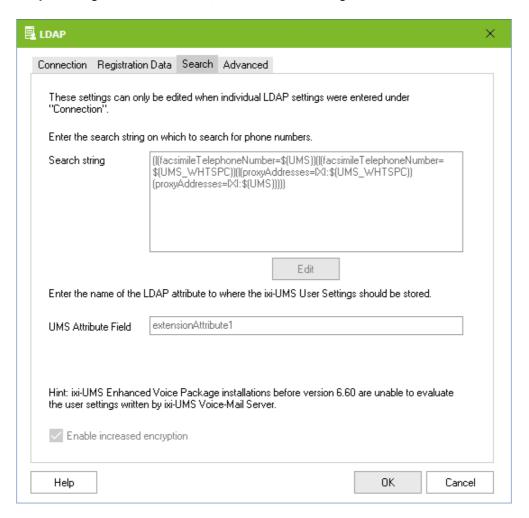
Base DN, User DN and Password for this user can be found in the configuration of your LDAP-server.



Per default the LDAP-query can be executed on all the OUs within the entire **Whole domain**. The search can be restricted to **Individual OUs** within one domain. If the search shall be limited to single OUs, they can be entered by clicking on the "Add"-button. The paths must be entered as full BaseDN.

4.2.3 Search

When a call comes in, the call number of the recipient is searched in the LDAP-data base. By default, the call number corresponds with the ixi-UMS number. Which LDAP-attributes shall be searched for this number has been determined with the installation/configuration of the ixi-UMS Mail Server Connector. Only in exceptional cases and only when fax number and voice number are different, it may make sense to change/shorten the **Search string** for the ixi-UMS Voice-Mail Server. The search string can only be changed if at "Connection", "individual LDAP settings" were entered.



The "**UMS Attribute Field**" determines the name of the LDAP-attribute, in which the user data of ixi-UMS and ixi-UMS Voice-Mail Server are stored. The name of the attribute depends on the mail system/LDAP-server that is used. Basically, you can use any attribute which fulfills the following requirements:

- String attributed and unlimited length
- String attribute (multiple values) and length at least 2 KB

Exception: Lotus Domino. Here, the extension of the "names.nsf" is absolutely required.

If the **ixi-UMS user data** (permissions, sender numbers) are stored in another Attribute (see ixi-UMS Connector), this Attribute must be entered.

If users shall be informed about new messages by SMS, the ISDN-sender number entered in the ixi-UMS tab of the user is used.

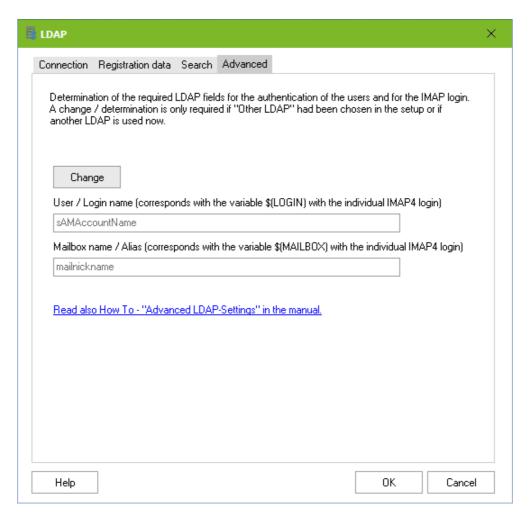
Note (not for user management in Lotus Domino)

With ixi-UMS Enterprise 6.60 the encryption of the PIN and the IMAP password for the Individual login at the mail server is increased. Only ixi-UMS Enhanced Voice Packages version 6.60 or higher and the ixi-UMS Voice-Mail Server are supported. Please note that the ixi-UMS Voice-Mailbox tab in the Active Directory must also be renewed.

4.2.4 Advanced

The preconfiguration of the LDAP-attributes stated here depends on the setting selected during the installation at "Select Mail Server and LDAP". The stated attributes are important for the assignment of the user to his mailbox as well as the login at the mail server by IMAP4.

If not Domino or Active Directory is used as LDAP-server or if the use of LDAP- and mail server differs from default, the needed LDAP-attributes may have to be changed in order to guarantee an error-free functioning. Please refer "Advanced LDAP-Settings" at Additional Information.



At **User / Login Name**, the definite attribute has to be entered with that the user can be identified. This can e.g. be his CN, uid or sAMAccountName. Please note that these entries are case-sensitive.

As Mailbox Name / Alias, the attribute has to be entered in LDAP, in which the mailbox name of the user is entered.

Remark: The attribute entered here at "User / Login Name" is also used for the check / identification of the user name with the NT-Authentication. Please refer to "Individual IMAP4 User Log-in" at Additional Information.

4.3 Mail System

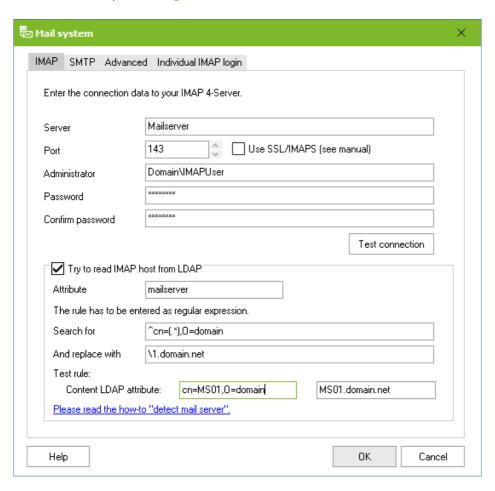
The required settings for the connection to the mail system can be changed here. IMAP4 and SMTP thereby can run on separate servers.

4.3.1 IMAP

The mail server for the IMAP-access must be entered here. If no mail server is entered here, please note the required entry at "SMTP", too.

For Microsoft Exchange 2007 and higher, the IMAP-access via IMAPS can be used. With Lotus Domino, IMAPS is not supported!

If the mailboxes are accessed via the "administrative access", the user must be entered for the IMAP-access to the mailboxes. Please note the required configuration of the mail server in order to enable the access.



If "only individual" is selected on the tab "<u>Advanced</u>" at "Access Mode", no global access is possible. The entry of a user is not possible.

The entry of a user is not possible.

The configuration under **Try to read IMAP host from LDAP** is only required in exceptional cases:

- 1. The mailboxes are distributed to several mail servers
- 2. The mail server is stated in the LDAP-data base

If the mailboxes of the users are distributed to several mail servers, the correct mail server must be detected before the respective IMAP-access. Several options are available for this:

1. Forward by "IMAP-Referral" (e.g. Microsoft Exchange)

No additional configurations are required.

2. Entry of the mail server in the ixi-UMS User Administration

The mail server must be entered per user in the "ixi-UMS Voice-Mailbox Configuration".

3. Detect the mail server out of an LDAP-Attribute

The mail server is entered in an LDAP-Attribute and must by read out by ixi-UMS Voice-Mail Server. For details about the required settings, please refer to How To: "Detect Mail Server".

At "Test rule", you can enter the content of the LDAP-Attribute in order to check whether a valid term for the network access is created.

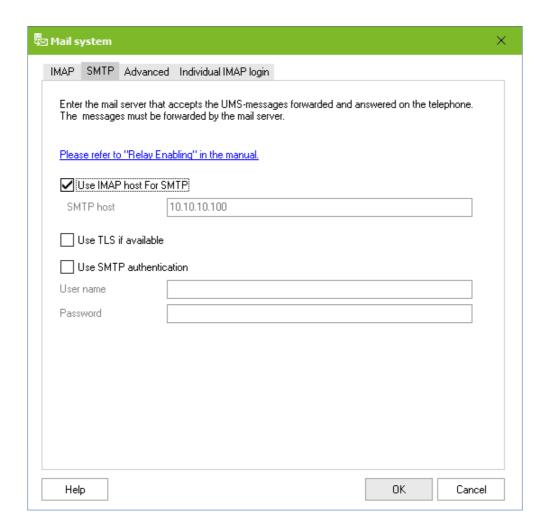
4.3.2 SMTP

Here the mail server must be entered, which takes care of the reception and the relaying of the UMS-messages created by telephone.

When the mail server for the message reception differs from the IMAP-server, the SMTP-server can be stated here.

The communication between mail server and ixi-UMS Voice-Mail Server can be encrypted.

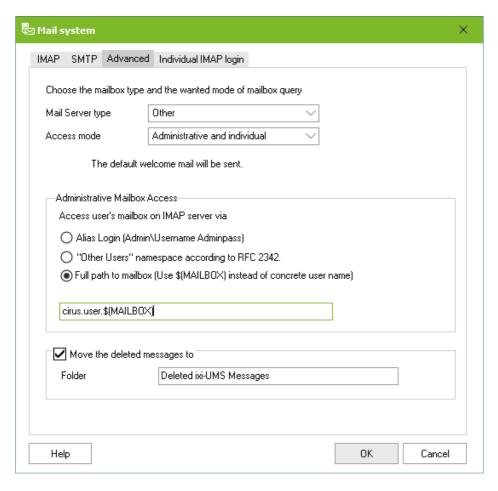
The ixi-UMS Voice-Mail Server in Version 6.0 does not validate the certificate.



If the mail server needs an **SMTP** authentication, the respective user must be entered here

4.3.3 Advanced

Here the **Mail Server Type** determined during the setup can be changed subsequently. Only in special cases, the entered mail server type should differ from the actually used mail server, as this setting is responsible for the mode of the IMAP4-Access.



In addition to that, it can be determined whether the **Access** should be realized via the "Administrative Login" or the "Individual User Login".

In exceptional cases, it may be desired that both the variants are used. This makes sense if there are multiple mailbox stores, for example, and the administrative login cannot be set up for all the mailboxes. Please note that in this case only the default welcome mail is sent.

In this case, the "individual login" is always used if a password is stored on the user

If this entry is required, the entry of the login data must be activated in ixi-UMS User Portal.

Depending on the selected mail server type, the mode of the **Administrative Mailbox Access** is preset. Diverging systems can be configured manually.

Example:

User management in "ixi-UMS User Managemant" or "Foreign LDAP" - mail server type Lotus Domino.

In this case, "Other" must be selected as mail server type. If an administrative access to the mailboxes shall be realized, the option "Other Users" Namespace must be selected. In both cases, the required LDAP-fields for the query must be entered at LDAP - Advanced.

"Full path to mailbox" only has to be entered in few special cases when the mail server does not support "Other Users" namespaces.

"Move the deleted messages to" determines, what shall happen with messages that are deleted by telephone via ixi-UMS Voice-Mail Server.

By default, a new folder "Deleted ixi-UMS Messages" is created here and the deleted messages are moved there.

When the checkmark is removed, the messages deleted via the telephone are deleted irrevocably.

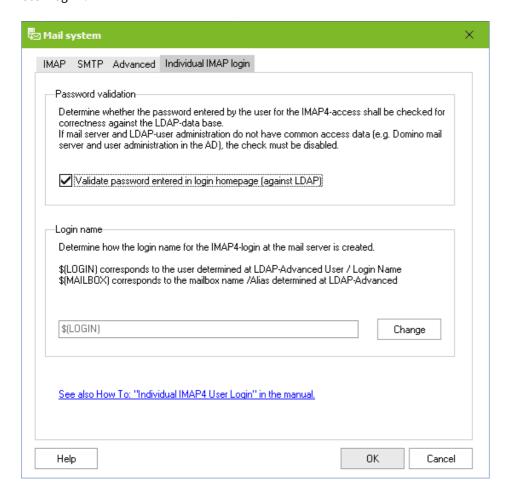
Please note: With a Cyrus mail server, for example, this folder cannot be created. The checkmark then should be removed.

Remark:

If the mail server type is changed here subsequently, the LDAP Attribute for the Login may have to be adjusted in the ixi-UMS Voice-Mailbox Configuration

4.3.4 Individual IMAP-Login

This configuration is only available if you have determined at "Advanced" that the **Access** shall be handled via the "Individual User Login".



If the password needed for the IMAP4-login (at the mail server) cannot be checked against the LDAP-data base, the checkmark at **Password validation** must be removed.

It has to be determined at **Login name**, with which information the IMAP4-login is executed.

For this login, the attributes determined at "LDAP - Advanced" are queried and its values are entered.

The following variables are available:

\$(LOGIN) = User name, Login name

\$(MAILBOX) = Mailbox name, Alias

Please note that the variable is case sensitive!

If the mail server and the LDAP-server are in the same organization, the default login is only with the "User name" of the user = \$(LOGIN)

If the domain is also needed for the login and the login must be with "domain/User name", the domain name can be entered via "Change" = Domain name/\$(LOGIN)

Depending on the mail server, the login with \$(LOGIN)@domain.de is also possible.

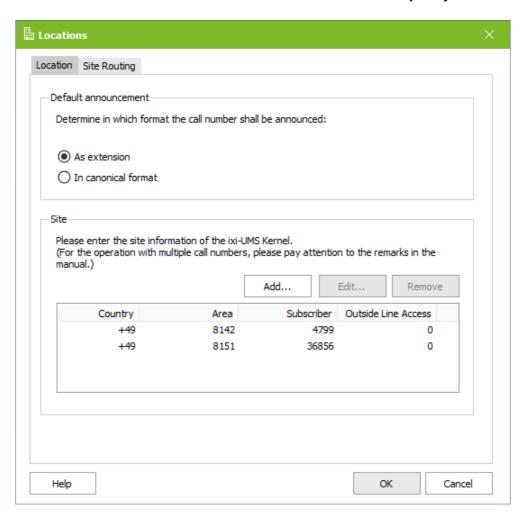
When login name and mailbox name are different, the login must be entered with \$(LOGIN)/\$(MAILBOX) or domain/\$(LOGIN)/\$(MAILBOX).

Please take care that with the IMAP4-login only / are used. You can test which login is need as described at How To "IMAP Login".

4.4 Location

Here it is determined, in which way the number shall be announced in the default announcement: As **extension** or in **canonical format**, this means as complete call numbers.

Precondition for the announcement of the extension is that the site data are entered completely und and are valid.

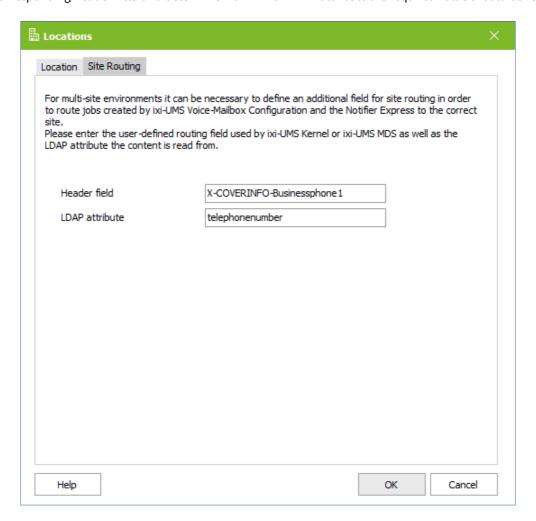


If several locations are connected, the location routing must also be defined.

The entries in the tab "Location routing" are only necessary if several locations are set up in the <%CORENAME%>. In this case, outgoing messages are routed to the individual locations via a field defined in the ixi-UMS Kernel under "Location Mapping".

This field defined for routing must be specified here. Only then can the MWI and SMS notifications generated by Notifier Express, as well as the jobs generated via the browser-based ixi-UMS Voice-Mailbox configuration for recording announcements via telephone be transferred to the correct location.

Specify the corresponding header field and determine from which LDAP attribute the required value should be read.



4.5 Notifier Express

The method of the notification can be deposited for all users globally. If individual settings are deposited at the user, these become valid.

Here you have to take care that the needed information is deposited at the single users, e.g. in the Active Directory: At MWI the office number at "General/Phone Number" or for the SMS-notification the mobile number at "Phone Numbers/Mobile"

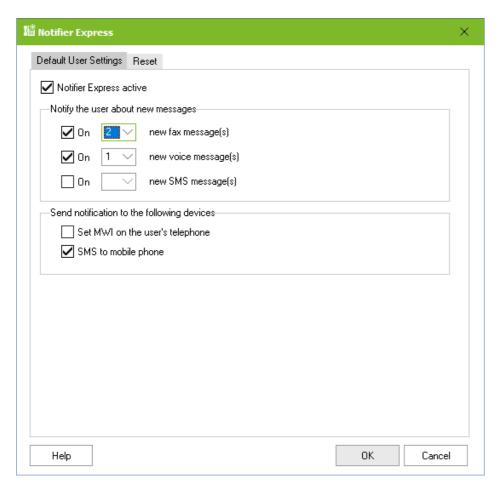
Remark:

The ixi-UMS fax sender number or the ISDN Sender number of the users is inserted as sender number for SMS-messages.

See also "User Configuration".

4.5.1 Default User Settings

When the Notifier Express is enabled, the configuration is available for all sorts of notifications.



It can be determined, at which sort and after how many messages an action shall be executed.

Depending on the features implemented, the user can be informed about a new message by MWI and/or SMS.

Please take into account that the actual sending feature depends on the services SMS and/or MWI installed at the ixi-UMS Kernel

For further information, please refer to "Basics - ixi-UMS Notifier Express".

Remark: In order to inform the user by MWI, the phone number of the user has to be entered in the User Administration in the following format: +49 8142 4799555.

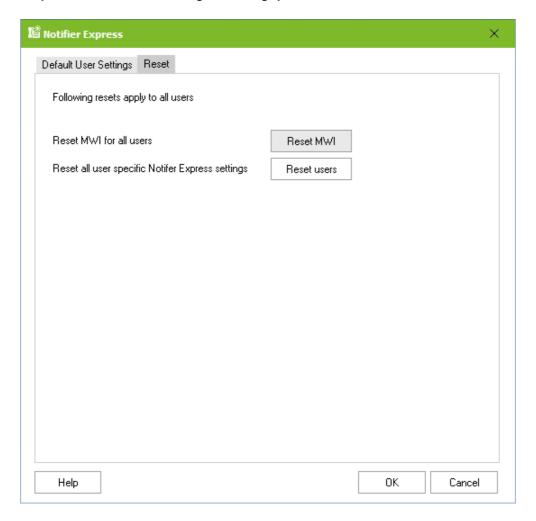
Remark: For notifications via SMS, the number defined under Phone Number Configuration is used as sender.

Remark: If e-mails and/or faxes shall be read via telephone, TTS and/or OCR is/are needed.

4.5.2 Reset

The resets affect all the users!

When the status of the notifications is set to "0", the couting of the incoming messages starts anew. For the notification system, none of the users has got a message yet and none of them has been notified.



When the user settings are reset, the <u>Default Settings</u> of the Notifier Express are valid for all the users.

4.6 TTS

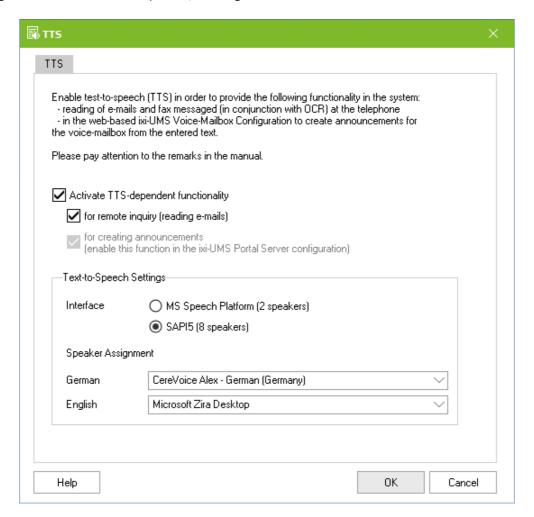
A "Text to Speech Engine" converts text into audio files. The "TTS" (Text-to-Speech) function is required:

- to send text messages which are read out to the called subscriber.
- to listen to e-mails and faxes (OCR is required) on the phone above the ixi-UMS Voice-Mail Server.
- to create the announcements in the browser-based ixi-UMS Voice-Mailbox Configuration

Under "Activate TTS-dependet functionality" the basic availability of the functions is set:

- Read aloud e-mails (valid for all users)
- Creating own announcements in the ixi-UMS Voice-Mailbox Configuration (assignment of rights in the ixi-UMS Portal Server)

If and for which **interface** (SAPI5, MS Speech Platform) a speaker is available is displayed behind the selection. After selecting the interface, the desired speaker / TTS engine can be selected.





The interface defined here is valid for all ixi-UMS components on this server. If this is changed, the other components (e.g. ixi-UMS Render Connector) must also be changed.

Depending on the operating system and the language of the operating system, Microsoft already provides/installs TTS engine. With the ixi-UMS Kernel TTS-Engines from Microsoft in different languages for the Microsoft Speech Platform are delivered and can be installed.

4.7 Global User Settings

In the default user settings, the properties and permissions assigned to a user by default with the first call are set up. The settings then can be changed at the user in the LDAP data base or by the user himself via the browser-based ixi-UMS Voice-Mailbox Configuration or at the telephone.

4.7.1 Voice Mail

If the checkmark is set at "**Voice mail enabled**", every user can makes use of the "voice box" and the caller can leave a message by default.

When the user has not deposited an own announcement, the default announcement is played:

Hello, you have reached the voice box <extension>. I am not in the office at the moment. Please leave a message after the tone.

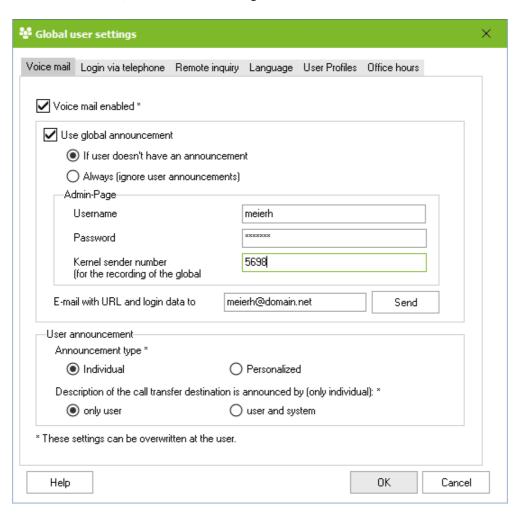
If "**Use global announcement**" is enabled, **one** individually recorded announcement can be used, e.g.: *Hello, this is company estos. The desired participant is busy at the moment. Please leave a message.*

Remark:

Only one announcement can be deposited. If required, it must contain the announcement in different languages. A language differentiation is not supported.

It has to be determined whether this announcement is used:

- when the user has not deposited an individual announcement
- or **Always**, this means the announcements of the users shall be ignored. In this case, the user can record an individual voice box announcement, however, this announcement is ignored.



The global announcement can be recorded via an "**Admin-page**" or can be deposited as wav-file directly in ixi-UMS Voice-Mail Server.

Admin-page: http://<IP-Adresse ixi-UMS>:8890/admRecGlobalAnc/

Deposit file: ixi-UMS Mobile\USERS\GlobalAnc\announcementGlobal.wav are deposited.

For recording the announcement via the **Admin-page**, the access data determined here as well as a valid sender number for the ixi-UMS Kernel are required. *User name* and *Password* are arbitrary and are not checked against an LDAP-directory. The link to open the Admin-page with the access data and an instruction can be sent **by e-mail** to any e-mail address.

If the global announcement shall only be played as long as the user does not have an own announcement, you have to determine which kind of **User announcement** shall be used:

Announcement type

Individual: Free text

Personalized: The user can only deposit his name

At **Description of the call transfer destination is announced by (only individual)** it is determined, who announces the selection for the forwarding of callers. This setting is only possible in combination with the announcement type "Individual".

only user The user must announce the selection for "Press 1 and 2" together with his individual announcement.

User and System: The user deposits a regular announcement and the ixi-UMS system then plays: "Press 1 to leave a

message or 2 to be forwarded to XXX"

4.7.2 Login via Telephone

It can be determined whether the users are allowed to **log in via telephone** by default or not. If this is allowed, the users can change their announcements and profiles via telephone. A connection to the mail server therewith is NOT released.

PIN

When a <u>welcome mail</u> is sent, a one-time PIN is generated and entered in the LDAP when sending the mail. The **minimum length of the PIN** can specified here.

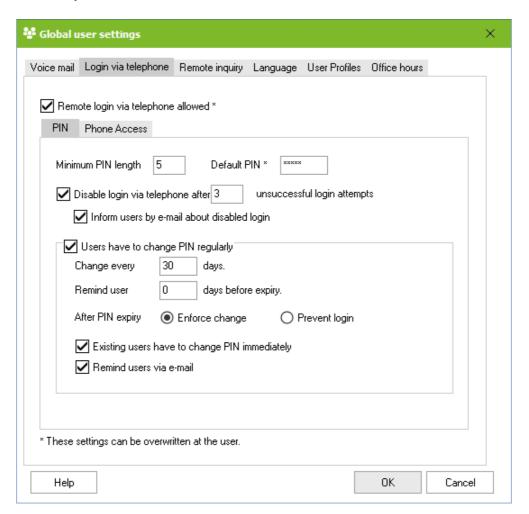
The change of the setting is NOT imparted to the already configured users.

The new settings are valid with new users and with the next change.

The field **Default PIN** ist only available if no <u>Welcomemail</u> is generated on the first call.

The PIN entered here is valid when users have **not entered a PIN AND no welcome mail** is generated with the first call.

It can be determined if and after how many unsuccessful login attempts of the PIN the "Voice-mailbox" is disabled and if the user then shall be notified by e-mail.



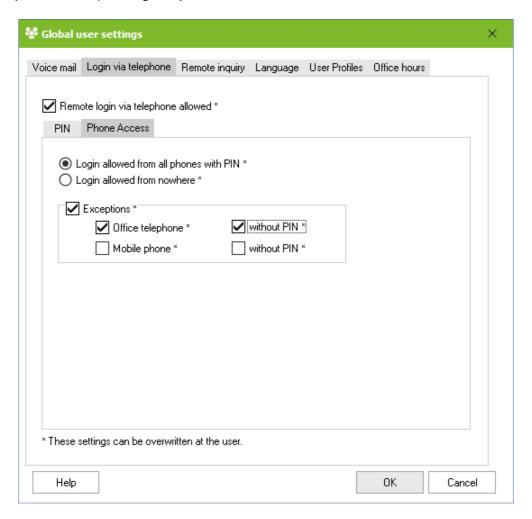
User have to change PIN regulary

Optionally, it can be determined if and when the users must change their PIN.

Phone access

By default, the user can log in from any phone by entering the PIN on his ixi-UMS Voice-Mailbox. Access can be restricted or extended per user.

If dialing into the mailbox is not possible in principle or only possible from an office telephone or mobile phone (or optionally without PIN entry), this can be specified globally here.



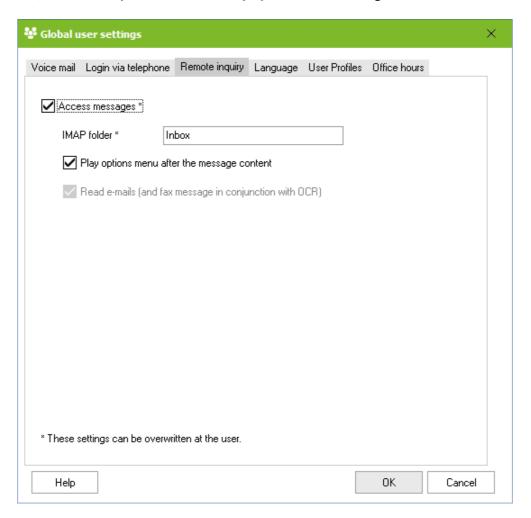
Please note that the phone numbers must be entered in the user administration.

4.7.3 Remote Inquiry

Here it is determined whether the users are also allowed to access their messages at the mail server.

At **IMAP Folder**, the "folder" in the mailbox of the user that is queried by ixi-UMS Voice-Mail Server by default is determined. Both settingd can be changed by admin in the user management at the user individually.

It can be determined, whether the options menu shall be played after the message content.

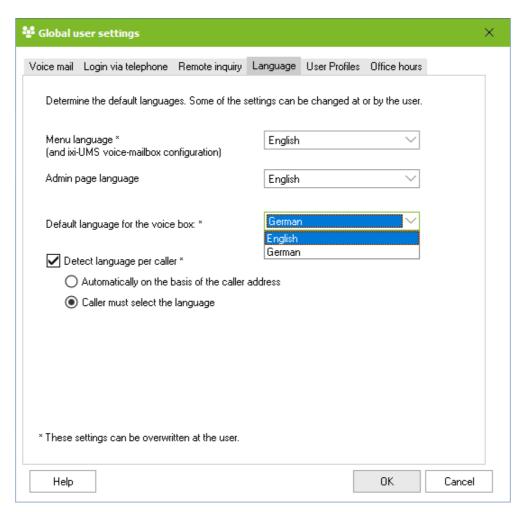


If a TTS Engine is installed and the function in the "TTS" menu is activated, users can also query your e-mails and SMS messages.. If OCR (Optical Character Recognition) is active at the ixi-UMS Kernel, faxes can be read as well.

4.7.4 Language

The languages used for the single announcements can be predefined globally, but can also be changed by the user, if required.

At **Menu language** it is determined whether the menu shall be in German or in English. In this language the ixi-UMS Voice-Mailbox is also displayed at the first start.



Admin page language

The language for the Admin-page for the recording of the global announcement cannot be changed by the user.

Default language for the voice box

Default language for the voice box

Announcement language

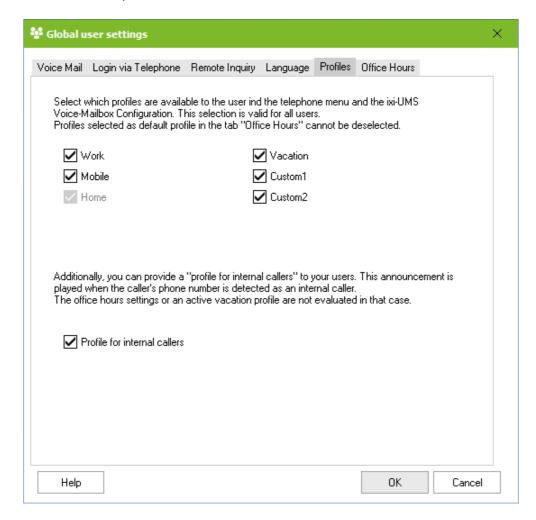
This option can only be used when no global announcement has been enabled for this user/voice box. If a global announcement is mandatory for all the users, there is only one announcement language/announcement available.

Automatically on the	Depending on the address of the caller, another language is played. The definition for
	this has to be deposited at "Country Codes".
Caller must select	The caller can choose between English and German and can determine the
	announcement language.

4.7.5 Profile

You can define which profiles are available to users in the phone menu and in the ixi-UMS Voice-Mailbox Configuration. The definition is valid for all users.

Profiles that are entered as default profiles under "Office hours" cannot be deselected.

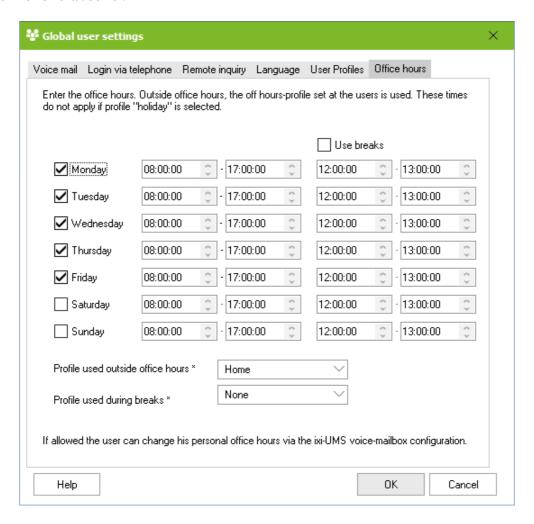


In addition, users can be provided with a profile for calls from "internal" subscribers. If the caller is recognized as an internal subscriber based on the location information, the greeting stored in this profile is played.

The greeting in the profile is always played for internal calls - without taking office hours or activation of the vacation profile into account.

4.7.6 Office Hours

Here, the office hours for the "off-hours profile" can be determined. The times are valid for all the users generally, however, they can be changed by the users individually via the browser-based ixi-UMS Voice-Mailbox Configuration if this has been enabled in the ixi-UMS Portal Server.



When an **off-hours profile** or a **break profile** is set, this is valid for all the users (at the initial installation). Please take care that an announcement for the respective profile is deposited for every user.

This setting can also be changed at the user object or via the ixi-UMS Voice-Mailbox Configuration.

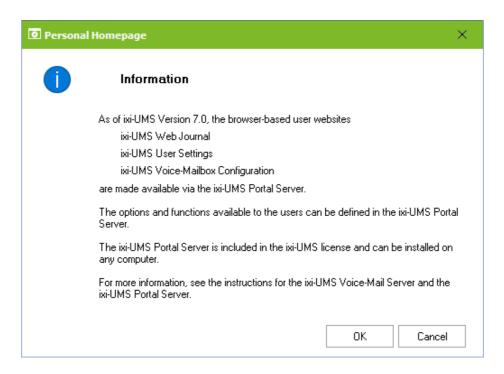
Remark:

When a user set the profile "Vacation", these times are not valid.

4.8 Personal Homepage

With the browser-based ixi-UMS Voice-Mailbox Configuration, users can conveniently manage their profile settings and announcements via their browser.

The ixi-UMS Voice-Mailbox Configuration is made available via the ixi-UMS Portal Server in the ixi-UMS User Portal.



Which functions and possibilities are offered to the user is defined in the ixi-UMS Portal Server. For further information on the installation and configuration of the ixi-UMS Portal Server please refer to the manual of the ixi-UMS Portal Server.

4.9 Menu Structure

The users can manage the ixi-UMS Voice-Mailbox via the telephone. If the users shall not have all the options at their disposal, some of the options can be disabled. The respective selection then is no longer available **at the telephone**.

The settings portrayed in the following are always valid for all the users.

4.9.1 Configuration

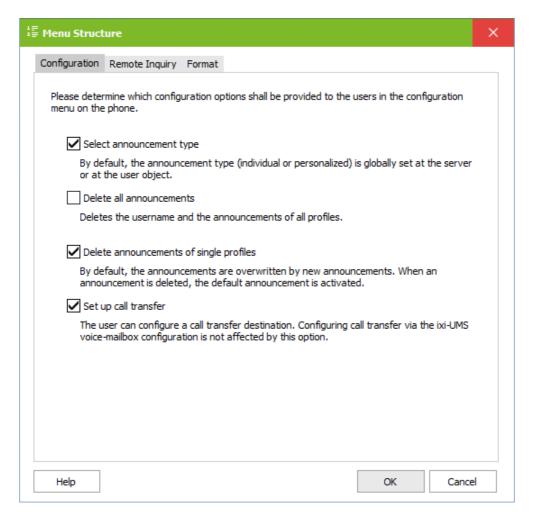
It can be determined which settings are available to the users in the profile settings.

Determine announcement type

Please determine whether the announcement type can only be set by the administrator (globally or per user) or whether the user is allowed to change these settings.

Delete all announcements

By default, only announcements can be recorded by the user. With this selection, the user can delete all announcements at the telephone. By doing so, the default announcement is active for all the profiles again.



Delete announcements of single profiles

By default, the announcements are overwritten by recording a new announcement. When an announcement is deleted, the default announcement is activated.

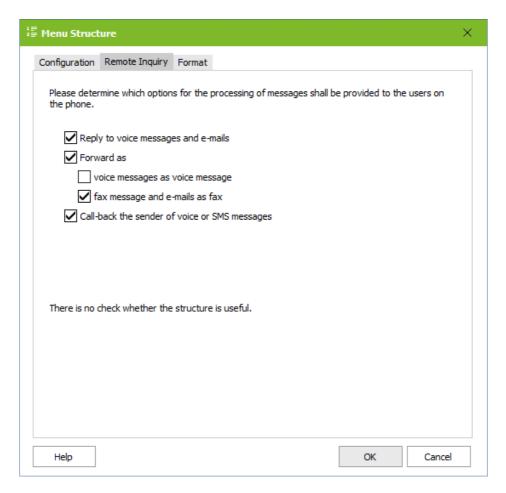
Set up call transfer

This option allows the user to configure a call transfer at the telephone, so the caller can decide whether he wants to leave a message or wants to be connected to the respective call number.

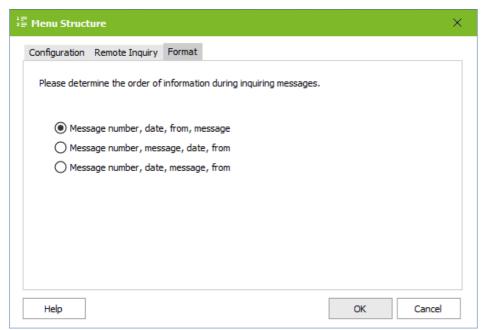
This option is available on the ixi-UMS Voice-Mailbox configuration and must be activated in the ixi-UMS Portal Server, if required.

4.9.2 Remote Inquiry

Depending on the message type, the user is offered options to forward and/or reply to a message. If not all options are available to the user, the selection can be hidden in the menu.



4.9.3 Format



Here you can determine the order, in which the user hears the information when inquiring the messages.

The announcement "Message 1" is always the first information.

Date, sender and message can be announced in any order.

This setting is valid for all the users!

4.10 Log

Here all the processes of the ixi-UMS Voice-Mail Server are logged. Logs should be activated only in case of an error or maximum with priority "Normal". The logs should only be set "Debug" for troubleshooting.

Voice Box

In the "*Functions*" log, all processes for calls and remote enquiry and part of the ixi-UMS ixi-UMS Voice-Mailbox Configuration are logged. Depending on the level set, all the queries, script calls and accesses are logged:

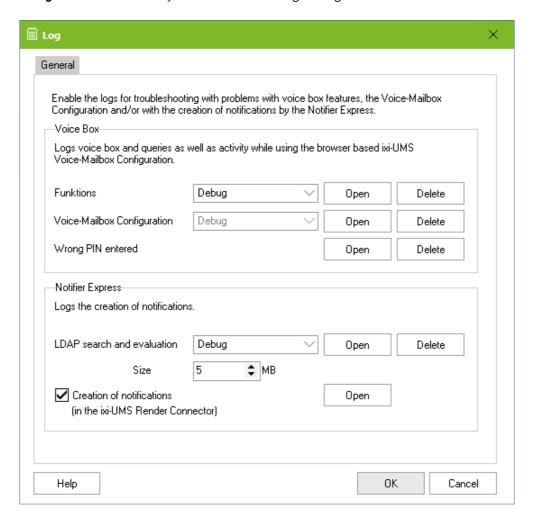
Level "Normal"

- LDAP Error and IMAP Error
- Called number
- Calling number
- Indication of the active profile (if available)
- Indication of the IMAP user

Level "Debug"

- same as level "Normal"
- LDAP-User data
- IMAP login and search
- Scripts

The setting for "*ixi-UMS Voice-Mailbox Configuration*" is depending on the setting for the log "functions" of the Voicebox. The log for the "*Wrong PIN entered*" is always written when a wrong PIN is given or the mail box is closed.

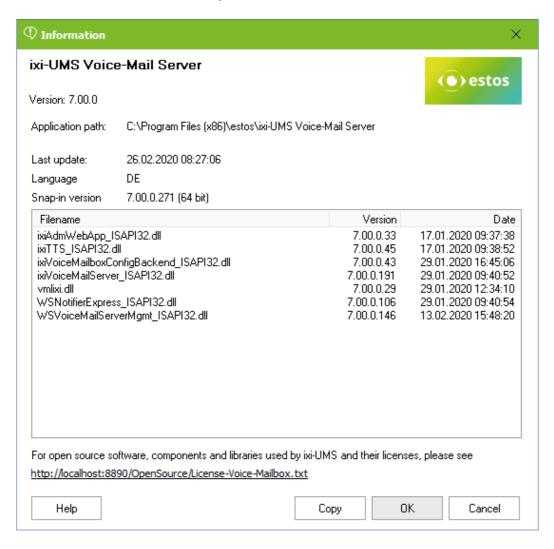


Notifier Express

Here the activities to the settings are logged at "Notifications". For the mistake evaluation both logs are always necessary.

4.11 Information

Displays information about version and installation path of the installed ixi-UMS Voice-Mail Server.



5 ixi-UMS Voice-Mailbox User Configuration

All the basic settings can be made globally at the ixi-UMS Voice-Mail Server and are valid for all the users when **"System Default"** has been selected in the configuration. Only if the users shall receive divergent settings, these have to be entered in the user management. If single users shall get different permissions, this is determined in the respective user manager in an own configuration interface.

If the users are managed in the **Open LDAP** (ixi-UMS User Management Console) or another user database separate from the mail server and the "remote inquiry by telephone" function is to be used, a configuration for the <u>IMAP access is mandatory</u>.

Important:

When the first call comes in, the user receives a "Welcome Mail" with his call number, PIN, the user manual and maybe the link to the browser-based ixi-UMS Voice-Mailbox Configuration.

The ixi-UMS Voice-Mailbox number is read out like determined in the configuration at "General".

The displayed PIN is entered at the user properties. If there is already a PIN deposited there, e.g. from a previous version, the user is notified about it.

The "Welcome Mail" can be <u>switched off</u> in the ixi-UMS Voice-Mail Server Configuration.

Remark:

The users can change several settings via the ixi-UMS Voice-Mailbox Configuration. For more detailed information, please refer to the ixi-UMS Portal Server Manual.

5.1 Active Directory Snap-In

The user administration of the UMS-users is realized by means of "Active Directory Users and Computers" snap-in.

On the machine on that the ixi-UMS Voice-Mail Server is installed, the tab "ixi-UMS Voice-Mailbox" is registered automatically, provided that the permissions are sufficient and the snap-in/role is available for the administration of "Active Directory Users and Computers".

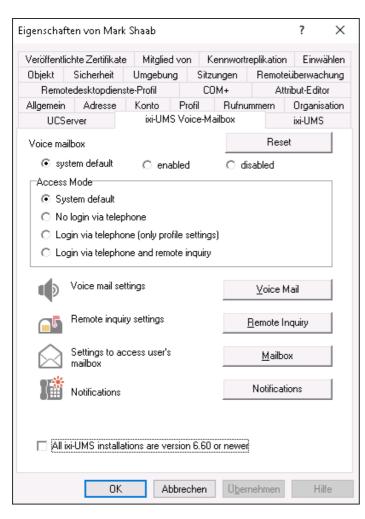
If the "ixi-UMS Voice-Mailbox" tab shall be available on other machines, it has to be registered subsequently.

Remark: The tab is only available on the machine, on which the DLL has be registered!

If the PIN has been entered incorrectly <u>several times</u> and therewith the account for the log in by telephone has been locked, it can be <u>unlocked</u> via the button "Reset". Via the button "Reset", you can select at any time:

Resend welcome mail With the next call, the user receives the welcome mail with his PIN again.		
Reset PIN and resend welcome mail	With the next call, the user receives the welcome mail again with a newly generated	
	PIN.	

All the basic settings can be made globally at the ixi-UMS Server and are valid for all the users when "**System Default**" has been selected in the each configurations. Only if the users shall receive divergent settings, these have to be entered in the user management.



If the Voice mailbox is disabled, the caller hears a respective announcement and cannot leave a message.

At **Access Mode** it can be determined, whether and for which features the user is entitled to log in by telephone.

System default:

The settings at the ixi-UMS Server are valid.

No login via telephone:

The user is not entitled to log in. He cannot record any announcements or access messages.

Login via telephone (only profile settings):

The user is entitled to log in via telephone, record his announcements and set all the profiles.

Login via telephone and remote inquiry:

The user is entitled to log in, set his profiles and access his messages.

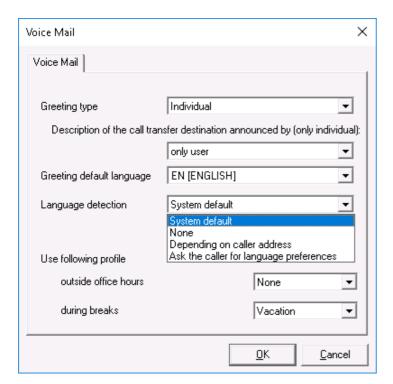
Further settings in terms of language and permissions can be made in the menues "Voice Mail", "Remote Inquiry", "Mailbox" and "Notifications".

All ixi-UMS installations are version 6.60 or newer

With ixi-UMS Enterprise 6.60 the encryption of the PIN and the IMAP password for the Individual login at the mail server is increased. Only ixi-UMS Enhanced Voice Packages version 6.60 or higher and the ixi-UMS Voice-Mail Server are supported. Please note that the ixi-UMS Voice-Mailbox tab in the Active Directory must also be renewed.

5.1.1 Voice Mail

In **Greeting type** it is determined, whether this user is enabled to use an individual or a personalized announcement.



At **Description of the call transfer destination is announced by (only individual)** it is determined, who announces the selection for the forwarding of callers. This setting is only possible in combination with the announcement type "Individual".

System Default:

The setting of the ixi-UMS Voice-Mail Server is used.

Only User:

The user must announce the selection for "Press 1 and 2" together with his individual announcement.

User and System:

The user deposits a regular announcement and the ixi-UMS system then plays: "Press 1 to leave a message or 2 to be forwarded to XXX"

The **Greeting default language** defines whether the caller hears the German or the English announcement by default. **Language detection** specifies the method used to find out the preferred language for the caller.

System default:	The language determined at Default Language is played.	
Depending on caller address:	Depending on what had been set at Country Codes / Languages, the caller can he	
	the announcement in the language based on the sender number (if available).	
Ask the caller for	The caller gets a selection of the available languages (German and English	
language preference:	default) and can choose which language he prefers.	

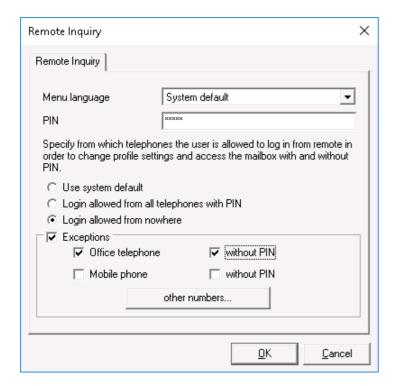
When a profile is defined for **outlide off-hours** or **during breaks**, this profile is activated automatically according to the fixed times.

Remark:

Depend of the settings in the ixi-UMS Portal Server the user can change these settings via the ixi-UMS Voice-Mailbox Configuration.

5.1.2 Remote Inquiry

At **Menu Language** it is determined, in which language the Mobile menu shall be announced to the user.



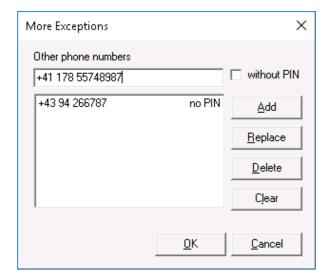
When the user has forgotten his **PIN** or has entered it incorrectly several times, a new PIN can be entered here.

Login allowed from all telephones with PIN is activated by default. That way, the users can access their voice box via any telephone and log in by entering the PIN.

If this shall not be allowed, you can switch over to **Login allowed from nowhere**.

At **Exceptions**, telephone numbers can be entered, from that the user can change his profile settings and access his messages. Depending on the general selection, call numbers can entered here which do not require a PIN-entry or it can be adjusted in general, from which telephone the users are allowed to log in.

The telephone numbers that may have have been entered in the AD at "General - Phone Number" and "Phone Numbers - Mobile" are predefined. If **without PIN** is selected, no PIN-entry is required from this telephone. When dialing in from one of the numbers defined here, the main menu is immediately read to the user.



At **Other Phone Numbers**, any phone number can be entered. It is also possible here to allow the dial in from this telephone without PIN-entry.

When entering phone numbers for the general access or the access without PIN you have to take care, that the phone numbers are deposited in the format +49 8142 47990.

Remark:

If the access is restricted to one phone number, the caller ID must not be suppressed.

5.1.3 Mailbox

IMAP Folder

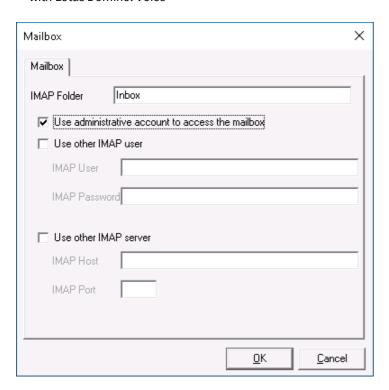
Here a mailbox folder can be assigned to the user that differs from the default entry.

In this folder, the ixi-UMS Voice-Mailbox is searched for new messages when the ixi-UMS Voice-Mail Server on the phone is queried.

Example:

If a subfolder "Voice" is created in the inbox of the user and all the voice mails are moved there rule-based, Inbox/Voice has to be entered here.

- with Microsoft Exchange: Inbox/Voice
- with Lotus Domino: Voice



If an <u>authorized account is used</u> to access all mailboxes (<u>administrative access</u>), mailbox access configuration is not required.

If no *administrative account for mailbox access* is used for this mailbox , the user must enter his password via the ixi-UMS Voice-Mailbox Configuration.

Version 7.0 optionally supports the "IndivLoginHomepage".

In this case, note the settings under Mail System - <u>Advanced</u> at ixi-UMS Voice-Mail Server.

If the <u>user name required for the IMAP access</u> is not stored in the LDAP database and can not be read out, this can be entered under **Use other IMAP user**. Optional this can also be entered by the user via the ixi-UMS Voice-Mailbox Configuration.

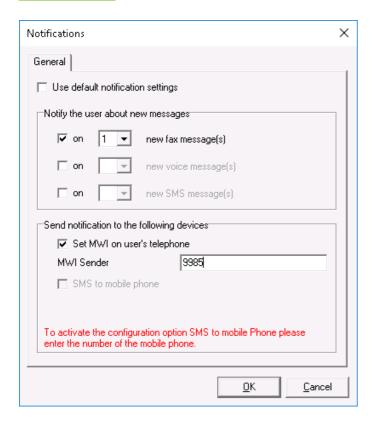
If the mailbox is not on the mail server <u>specified in ixi-UMS Voice-Mail Server</u> and the mail server does not support "IMAP4 forwarding" (e.g. Lotus Domino) and if it is not stored <u>in the LDAP database</u>, it must be specified as a different IMAP server.

Note:

If users have to enter the password to access their mailbox, the welcome message has to be sent, because the link to enter the password (only in version 7.0) is included in it or the entry via the ixi-UMS Voice-Mailbox Configuration has to be activated.

5.1.4 Notifications

It is determined here after how many and which sort of incoming messages the user shall receive a notification. In order to be able to make use of the "Message Waiting Indication" or "SMS to the mobile phone", you have to make the respective setting in the ixi-UMS Kernel Configuration, in the ixi-UMS Voice-Mail Server Configuration and the Notifier Express must be activated.



If "Use default notificationn settings" are activated, individual settings can be made here.

The <u>Default Settings of the Notifier Express</u> are used.

If enabled in ixi-UMS User Portal, users can change these settings in ixi-UMS Voice-Mailbox Configuration.

At **Send notifications to the following devices** it can be determined, how the user is informed. Only the options are active that can be used on the basis of the deposited information. Missing yet required information is indicated.

In the Configuration of the ixi-UMS Voice-Mail Server at <u>General - Number conversion</u> it can be termined, from which LDAP-Attribute the number for the MWI-notification is read out.

Sender of the "Message Waiting Indication" (MWI) at the Telephone:

By default, the UMS-extension of the user is displayed as sender number at the telephone. If "Route-By-Redirection" was activated in the configuration of the ixi-UMS Voice-Mail Server at <u>General - Number configuration</u>, the number entered there is displayed at the telephone of the user as call back number. It should be guranteed that the user is connected to his mailbox with this number by call-back.

In environments with e.g. networked PBX's it can happen that the internal and the external extension differ in order to get access to the UMS Server.

In cases like this, the UMS number "dialed" from the outside has to be entered as recipient number at the user. The differing internal MWI callback number must be deposited at the users separately.

In this case, the entire configuration of the notifications MUST be set at the user individually. No default settings are valid any more.

In environments with several ixi-UMS Kernel sites AND the use of Route-By-Redirection, the respective voice box number must be entered here.

Remark: In order to inform the user by MWI, the phone number of the user has to be entered in the User

Administration in the following format: +49 8142 4799555.

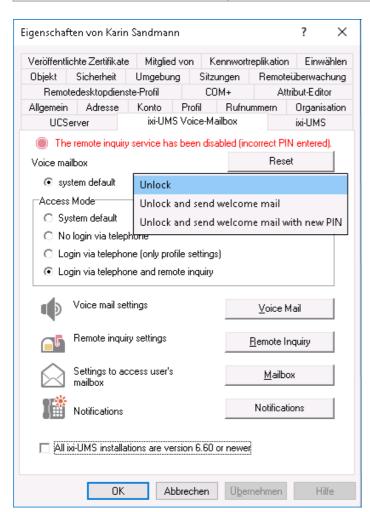
The fax number of the users is used as sender number for SMS-messages.

Remark: If e-mails and/or faxes shall be read via telephone, TTS and/or OCR is/are needed.

5.1.5 Reset - Unlock voice-mailbox

Via the button "Reset", you can select at any time:

Resend welcome mail	With the next call, the user receives the welcome mail with his PIN again.		
	With the next call, the user receives the welcome mail again with a newly generated PIN.		



If the PIN has been entered incorrectly <u>several times</u>, the account for the access via telephone is locked. Via the button "Reset", it can be unlocked and you can choose, whether and which further action shall be executed:

Unlock:

The access by telephone is unlocked.

Unlock and resend welcome mail

The access is unlocked and the user receives the welcome mail with his PIN again with the next call.

Unlock, reset PIN and resend welcome mail

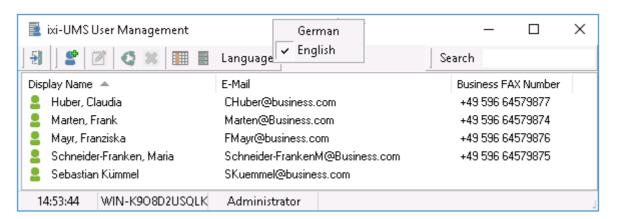
The access is unlocked and the user receives the welcome mail with a newly generated PIN with the next call.

5.2 ixi-UMS User Management

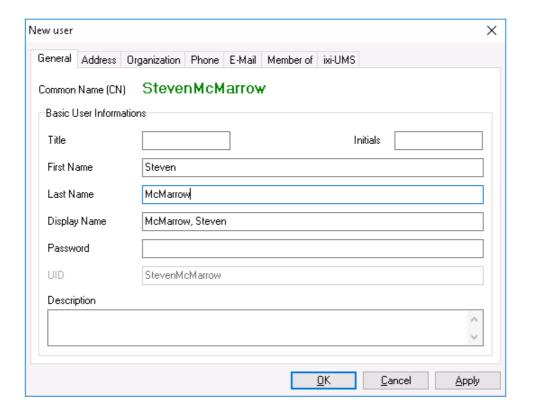
If <u>"Using OpenLDAP for User Management"</u> was chosen during the installation, the UMS users are managed in the ixi-UMS Management Console.

The ixi-UMS Management Console had been installed with the ixi-Framework and can be started via the start menu or via the icon at the desktop.

The tab for the ixi-UMS user configuration is installed also.



Via the button , a new user can be created.



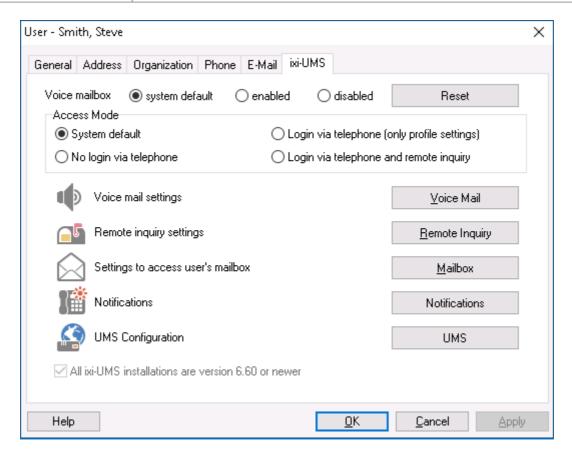
For further information, please refer to the ixi-UMS Mail Server Connector or ixi-Framework Manual.

All the basic settings can be made globally at the ixi-UMS Server and are vaild for all the users when **"System Default"** has been selected in the configuration. hus, e.g. Deactivate the voice-mailbox on the server and activate it only for selected users. If the function "remote inquiry by telephone" is to be used, a <u>configuration for the IMAP access</u> is absolutely necessary.

If the PIN has been entered incorrectly <u>several times</u> and therewith the account for the log in by telephone has been locked, it can be unlocked via the button "<u>Reset</u>". The button "Reset" is always available. The options are explained under: <u>Reset - Unlock voice-mailbox</u>

If the **Voice mailbox** is disabled, the caller hears a respective announcement and cannot leave a message. At **Access Mode** it can be determined, whether and for which features the user is entitled to log in by telephone.

System default:	The settings at the ixi-UMS Server are valid.	
No login via telephone:	The user is not entitled to log in. He cannot record any announcements or access	
	messages.	
Login via telephone	The user is entitled to log in via telephone, record his announcements and set all the	
(only profile settings):	profiles, independent of the settings in "Global User Settings - Login via telephone".	
Login via telephone and	The user is entitled to log in, set his profiles and access his messages, independent of the	
remote inquiry:	settings in "Global User Settings - Remote Inquiry"	



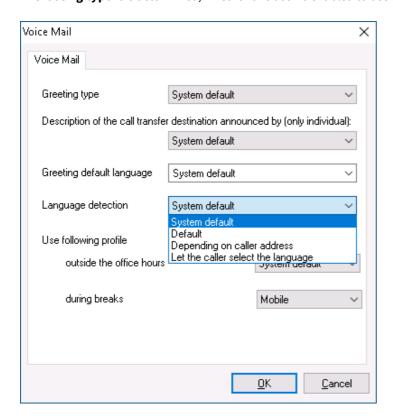
Further settings in terms of language and permissions can be made in the menues "<u>Voice Mail</u>", "<u>Remote Inquiry</u>", "<u>Mailbox</u>" and "<u>Notifications</u>".

All ixi-UMS installations are version 6.60 or newer

With ixi-UMS Enterprise 6.60 the encryption of the PIN and the IMAP password for the Individual login at the mail server is increased. Only ixi-UMS Enhanced Voice Packages version 6.60 or higher and the ixi-UMS Voice-Mail Server are supported. Please note that the ixi-UMS Voice-Mailbox tab in the Active Directory must also be renewed.

5.2.1 Voice Mail

In Greeting type it is determined, whether this user is enabled to use an individual or a personalized announcement.



At **Description of the call transfer destination is announced by (only individual)** it is determined, who announces the selection for the forwarding of callers. This setting is only possible in combination with the announcement type "Individual".

System Default:

The setting of the ixi-UMS Voice-Mail Server is used.

Only User:

The user must announce the selection for "Press 1 and 2" together with his individual announcement.

User and System:

The user deposits a regular announcement and the ixi-UMS system then plays: "Press 1 to leave a message or 2 to be forwarded to XXX"

The **Greeting default language** defines whether the caller hears the German or the English announcement by default. **Language detection** specifies the method used to find out the preferred language for the caller.

System default:	The language determined at Default Language is played.	
Depending on caller address:	Depending on what had been set at Country Codes / Languages, the caller can hear	
	the announcement in the language based on the sender number (if available).	
Ask the caller for	The caller gets a selection of the available languages (German and English	
language preference:	default) and can choose which language he prefers.	

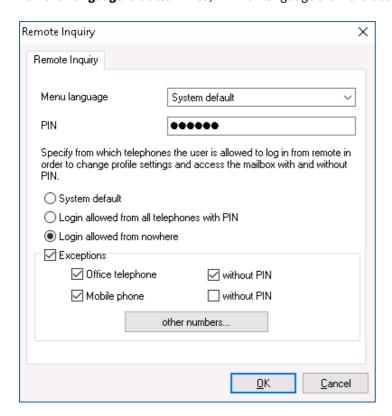
When a profile is defined for **outlide off-hours** or **during breaks**, this profile is activated automatically according to the <u>fixed</u> times.

Remark:

Depend of the settings in the ixi-UMS User Portal the user can change these settings via the ixi-UMS Voice-Mailbox Configuration.

5.2.2 Remote Inquiry

At **Menu Language** it is determined, in which language the menu at the phone shall be announced to the user.



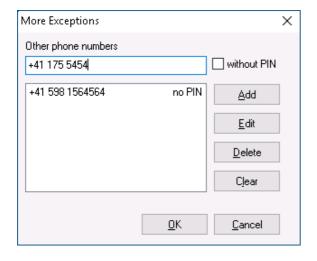
When the user has forgotten his **PIN** or has entered it incorrectly several times, a new PIN can be entered here.

Login allowed from all telephones with PIN is activated by default. That way, the users can access their voice box via any telephone and log in by entering the PIN.

If this shall not be allowed, you can switch over to **Login allowed from nowhere**.

At **Exceptions**, telephone numbers can be entered, from that the user can change his profile settings and access his messages. Depending on the general selection, call numbers can entered here which do not require a PIN-entry or it can be adjusted in general, from which telephone the users are allowed to log in.

The telephone numbers that may have have been entered in the AD at "General - Phone Number" and "Phone Numbers - Mobile" are predefined. If **without PIN** is selected, no PIN-entry is required from this telephone. When dialing in from one of the numbers defined here, the main menu is immediately read to the user.



At **Other Phone Numbers**, any phone number can be entered. It is also possible here to allow the dial in from this telephone without PIN-entry.

When entering phone numbers for the general access or the access without PIN you have to take care, that the phone numbers are deposited in the format +49 8142 47990.

Remark:

If the access is restricted to one phone number, the caller ID must not be suppressed.

5.2.3 Mailbox

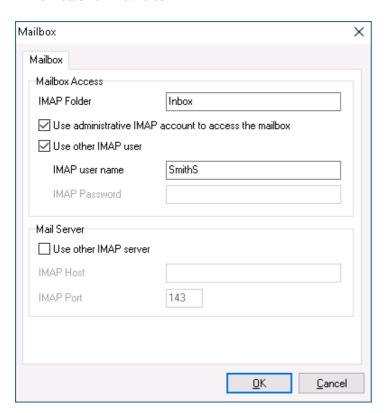
IMAP Folder

Here a mailbox folder can be assigned to the user that differs from the <u>default entry</u>. New messages are then searched for in this folder.

Example:

If a subfolder "Voice" is created in the inbox of the user and all the voice mails are moved there rule-based, Inbox/Voice has to be entered here.

- with MS Exchange: Inbox/Voice
- with Lotus Domino: Voice



If an <u>authorized account is used</u> to access all mailboxes (<u>administrative access</u>), mailbox access configuration is not required.

If no *administrative account for mailbox access* is used for this mailbox , the user must enter his password via the ixi-UMS Voice-Mailbox Configuration.

Version 7.0 optionally supports the "IndivLoginHomepage".

In this case, note the settings under Mail System - Advanced at ixi-UMS Voice-Mail Server.

If the <u>user name required for the IMAP access</u> is not stored in the LDAP database and can not be read out, this can be entered under **Use other IMAP user**. Optional this can also be entered by the user via the ixi-UMS Voice-Mailbox Configuration.

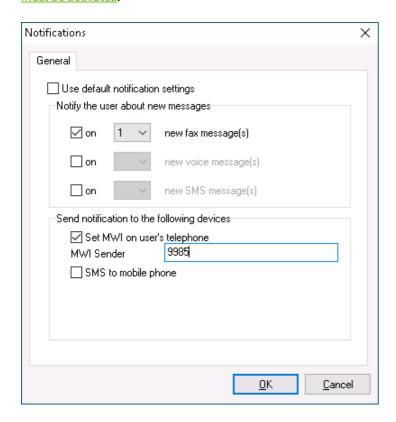
If the mailbox is not on the mail server <u>specified in ixi-UMS Voice-Mail Server</u> and the mail server does not support "IMAP4 forwarding" (e.g. Lotus Domino) and if it is not stored <u>in the LDAP database</u>, it must be specified as a different IMAP server.

Note:

If users have to enter the password to access their mailbox, the welcome message has to be sent, because the link to enter the password (only in version 7.0) is included in it or the entry via the ixi-UMS Voice-Mailbox Configuration has to be activated.

5.2.4 Notifications

It is determined here after how many and which sort of incoming messages the user shall receive a notification. In order to be able to make use of the "Message Waiting Indication" or "SMS to the mobile phone", you have to make the respective setting in the ixi-UMS Kernel Configuration, in the ixi-UMS Voice-Mail Server Configuration and the Notifier Express must be activated.



If "Use default notificationn settings" are activated, individual settings can be made here.
The Default Settings of the Notifier Express are used.

If enabled in ixi-UMS Portal, users can change these settings in ixi-UMS Voice-Mailbox Configuration.

At **Send notifications to the following devices** it can be determined, how the user is informed. Only the options are active that can be used on the basis of the deposited information. Missing yet required information is indicated.

In the Configuration of the ixi-UMS Voice-Mail Server at <u>General - Number conversion</u> it can be termined, from which LDAP-Attribute the number for the MWI-notification is read out.

Sender of the "Message Waiting Indication" (MWI) at the Telephone:

By default, the UMS-extension of the user is displayed as sender number at the telephone. If "Route-By-Redirection" was activated in the configuration of the ixi-UMS Voice-Mail Server at <u>General - Number configuration</u>, the number entered there is displayed at the telephone of the user as call back number. It should be guranteed that the user is connected to his mailbox with this number by call-back.

In environments with e.g. networked PBX's it can happen that the internal and the external extension differ in order to get access to the UMS Server.

In cases like this, the UMS number "dialed" from the outside has to be entered as recipient number at the user. The differing internal MWI callback number must be deposited at the users separately.

In this case, the entire configuration of the notifications MUST be set at the user individually. No default settings are valid any more.

In environments with several ixi-UMS Kernel sites AND the use of Route-By-Redirection, the respective voice box number must be entered here.

Remark: In order to inform the user by MWI, the phone number of the user has to be entered in the User Administration in the following format: +49 8142 4799555.

The fax number of the users is used as sender number for SMS-messages.

Remark: If e-mails and/or faxes shall be read via telephone, TTS and/or OCR is/are needed.

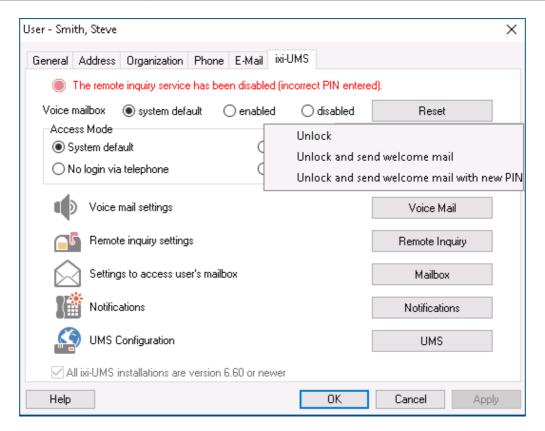
5.2.5 Reset - Unlock voice-mailbox

Via the button "Reset", you can select at any time:

Resend welcome mail With the next call, the user receives the welcome mail with his PIN again	
Reset PIN and resend welcome mail	With the next call, the user receives the welcome mail again with a newly generated
	PIN.

If the PIN has been entered incorrectly <u>several times</u>, the account for the access via telephone is locked. Via the button "Reset", it can be unlocked and you can choose, whether and which further action shall be executed:

Unlock	The access by telephone is unlocked.	
Unlock and resend welcome mail	The access is unlocked and the user receives the welcome mail with his PIN again with the next call.	
Unlock, reset PIN and resend welcome mail	The access is unlocked and the user receives the welcome mail with a newly generated PIN with the next call.	



5.3 Lotus Domino

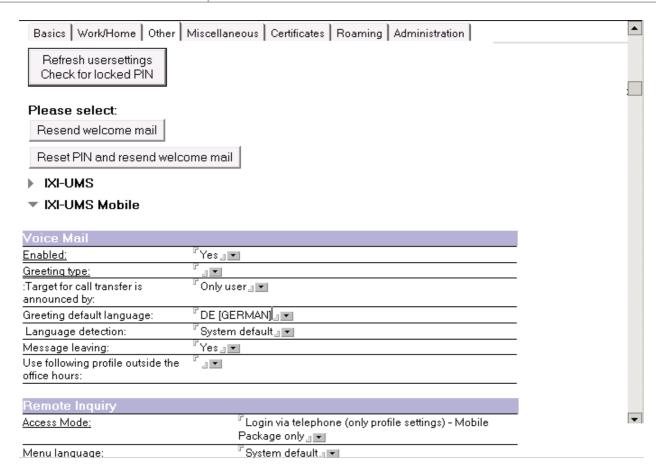
The Names.nsf is installed with the ixi-UMS Mail Server Connector. In the field "Fax Number" in the User Properties, the UMS recipient number has to be entered. For more detailed information to the configuration of ixi-UMS, please refer to the ixi-UMS Mail Server Connector Manual.

All the basic settings can be made globally at the ixi-UMS Voice-Mail Server and are vaild for all the users when **"System Default"** has been selected in the configuration. Only if the users shall receive divergent settings, these have to be entered in the user management.

When opening the user document, you do not always have to set it in edit mode: There is a button with that it is checked, whether the <u>PIN of the user might have been locked</u>.

You can select at any time:

Resend welcome mail With the next call, the user receives the welcome mail with his PIN		
Reset PIN and resend welcome mail	With the next call, the user receives the welcome mail again with a newly generated	
	PIN.	



5.3.1 Voice Mail

If in the section Voice Mail, **Enabled** is set to No, the caller gets an announcement that the ixi-UMS Voice-Mailbox is disabled. In **Greeting type** it is determined, whether this user is enabled to use an individual or a personalized announcement.

At **Target for Call transfer** is announced by: it is determined, who announces the selection for the call transfer.

Voice Mail	
Enabled:	Yes
Greeting type:	
Target for call transfer is announced by:	System default
Greeting default language:	System default
Language detection:	System default
Message leaving:	Yes
Use following profile	
during office hours:	Office
during breaks:	Mobil

System Default:

The setting of the ixi-UMS Server is used.

Only User:

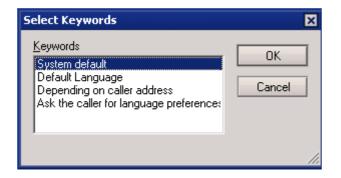
The user must announce the selection for "Press 1 and 2" together with his individual announcement.

User and System:

The user deposits a regular announcement and the ixi-UMS system then plays: "Press 1 to leave a message or 2 to be forwarded to XXX".

The **Greeting default language** specifies the default announcement language used for the user if no "better" language can be obtained for the caller.

At **Language detection** it can be determined, on the basis of which criteria the announcement language for the caller is selected.



System default:

The language determined at Default Language is played.

Depending on caller address:

Depending on what had been set at Country Codes / Languages, the caller can hear the announcement in the language based on the sender number (if available).

Ask the caller for language preference:

The caller gets a selection of the available languages (German and English by default) and can choose which language he prefers.

You have to determine whether the caller can leave a message at this ixi-UMS Voice-Mailbox or not.

When a profile is defined for during off-hours or during breaks, this profile is activated automatically according to the fixed times.

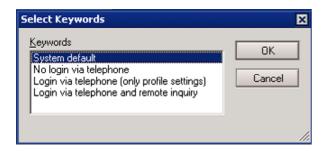
Remark:

Depend of the settings in theixi-UMS User Portal the user can change these settings via the ixi-UMS Voice-Mailbox Configuration.

Remark: These times are not valid for the profile "Vacation".

5.3.2 Remote Inquiry

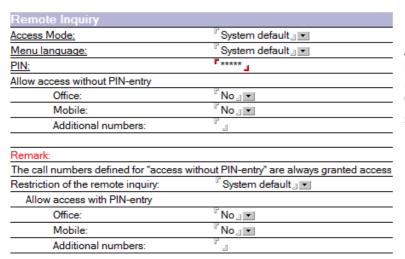
At **Access Mode** it can be determined, whether the user can only receive voice mails, record his announcements additionally or also access his mailbox.



If System default is chosen, the settings of the ixi-UMS Voice-Mail Server are used.

Please take into account the different settings at "Remote Inquiry" and the "Mobile Package" here.

System default:	The settings at the ixi-UMS Voice-Mail Server are valid.	
No login via telephone:	The user is not entitled to log in. He cannot record any announcements or access messages.	
Login via telephone (only profile settings):	The user is entitled to log in via telephone, record his announcements and set all the profiles, independent of the settings in "Global User Settings - Login via telephone".	
Login via telephone and remote inquiry:	The user is entitled to log in, set his profiles and access his messages, independent of the settings in "Global User Settings - Remote Inquiry"	



At **Menu language** it is determined, in which language the Mobile Menu is announced to the user.

When the user forgot or entered his **PIN** incorrectly several times, a new PIN can be assigned here.

By default, the users can dial in their voice box from any telephone and log in by means of PIN-entry.

At **Allow access without PIN-entry**, phone numbers can be stated from that the user can change his profile settings and access his messages without having to enter the PIN. When dialing in from a number defined here, the main menu is read to the user immediately.

When the **Restriction of the remote inquiry** is enabled, the log in by telephone can only be done by the call numbers defined subsequently AND the allowed phone numbers at **Access withour PIN**. If "System Default" is selected, the <u>restrictions as determined</u> at the ixi-UMS Voice-Mail Server are valid.

When entering phone numbers for the general access or the access without PIN you have to take care, that the phone numbers are deposited in the format +49 8142 47990.

Remark

If the access is restricted to one phone number, the caller ID must not be suppressed.

5.3.3 Mailbox

An Outlook folder other than the <u>Default Entry</u> can be assigned to the user here.

This folder is searched for new messages then.

Example

If a subfolder "Voice" is set up in the inbox of the user, Voice has to be entered here.

Mailbox		
IMAP folder:	inbox	·

5.3.4 Notifications

It is determined here after how many and which sort of incoming messages the user shall receive a notification.

In order to be able to make use of the "Message Waiting Indication" or "SMS to the mobile phone", you have to make the

respective setting in the ixi-UMS Kernel Configuration, in the ixi-UMS Voice-Mail Server <u>Configuration</u> and the <u>Notifier Express</u> <u>must be activated</u>.

If **Use default settings for notifications** is enabled, no individual settings can be made at the user. The <u>Default Settings of the Notifier Express</u> are adopted.

If nothing is entered at the user, the settings of the Notifier Express "Default User" are used.

Notifications

on 「1 」▼ new fax message(s)		
on J ▼ new voice message(s)		
on new SMS message(s)		
Send notification to the following	ng devices	
Set MWI on user's phone:	^r Yes』▼	
MWI sender:	[『] 4564』	
SMS to mobile phone:	[™] Yes』▼	
Call the user at [□] office 』▼	r¦Yes』▼	

Notify the user about new messages

At **Send notifications to the following devices** it can be determined, how the user is informed. Only the options are active that can be used on the basis of the deposited information. Missing yet required information is indicated.

In the Configuration of the ixi-UMS Voice-Mail Server at <u>General-Number conversion</u> it can be termined, from which LDAP-Attribute the number for the MWI-notification is read out.

Sender of the "Message Waiting Indication" (MWI) at the Telephone:

By default, the UMS-extension of the user is displayed as sender number at the telephone. If "Route-By-Redirection" was activated in the configuration of the ixi-UMS Voice-Mail Server at <u>General - Number configuration</u>, the number entered there is displayed at the telephone of the user as call back number. It should be guranteed that the user is connected to his mailbox with this number by call-back.

In environments with e.g. networked PBX's it can happen that the internal and the external extension differ in order to get access to the UMS Server.

In cases like this, the UMS number "dialed" from the outside has to be entered as recipient number at the user. The differing internal MWI callback number must be deposited at the users separately.

In this case, the entire configuration of the notifications MUST be set at the user individually. No default settings are valid any more.

In environments with several ixi-UMS Kernel sites AND the use of Route-By-Redirection, the respective voice box number must be entered here.

Remark: In order to inform the user by MWI, the phone number of the user has to be entered in the User

Administration in the following format: +49 8142 4799555.

Remark: If e-mails and/or faxes shall be read via telephone, TTS and/or OCR is/are needed.

5.3.5 ixi-UMS User Data Attributes / Tools

All the data are stored in an LDAP-Attribute, as shown in the following:

IXI-UMS UserDataAttribute/Tools

Set IXI-UMS data as default

"IXIISDNOriginatingAddress=","|XIFaxSenderNumber=","|XICostCenter=","|XIMessageHeader=","|XIFaxMaxPages= 0","|XIPermSendPriority=","|XIFAXPermTSvc=4","|XISMSPermTSvc=4","|XIVOCPermTSvc=4","|XI-UMSMobileEnabled=Y","|XI-UMSPINFailureCount=0","

IXI-UMSMobilePIN=MTIzNDU=","IXI-UMSMobileLevel=M","IXI-UMSMobileAnnouncementFlags=ENEN....","IXI-UMS MobileNoMessageProfiles=","IXI-UMSMobileOH=","ixi-umsMobileRestrictionFlags=.....","ixi-umsMobileIMAPMailbox=inbox","MNThrshlds=","MNDestDev="

Moreover, the set parameters can be "distributed" to all the users.

5.3.6 Reset - Unlock voice-mailbox

If the PIN has been entered incorrectly <u>several times</u>, the account for the access via telephone is locked. Via the button "Reset", it can be unlocked and you can choose, whether and which further action shall be executed:

Basics | Work/Home | Other | Miscellaneous | Certificates | Roaming | Administration |

Refresh usersettings Check for locked PIN

The remote inquiry service has been disabled (incorrect PIN entered).

Please select:

Unlock

Unlock and resend welcome mail

Unlock, reset PIN and resend welcome mail

Unlock	The access by telephone is unlocked.
Unlock and resend welcome mail	The access is unlocked and the user receives the welcome mail with his PIN again with the next call.
Unlock, reset PIN and resend welcome mail	The access is unlocked and the user receives the welcome mail with a newly generated PIN with the next call.

6 Info

6.1 About estos



estos GmbH, headquartered in Olching near Munich, Germany, is a leading manufacturer of software solutions with focus on unified communication with unified messaging, fax, voice mail, SMS and CTI (Computer Telephony Integration) with presence and instant messaging. The products of %Firma% support existing standards like standard interfaces and standard hardware; proprietary solutions are avoided. The company strives to provide its customers with future-oriented product development, with a focus on integration in available environments.

Contact details:

estos GmbH Ilzweg 7 82140 Olching Germany

Phone: +49 8142 4799-0 Fax: +49 8142 4799-3434 E-mail: <u>sales@estos.de</u> Web: <u>www.estos.com</u>

© estos GmbH. All rights reserved. Changes, errors and misprints reserved. Product names are registered trademarks or trademarks of their respective owners. The terms of business of estos GmbH come into force.

6.2 Version

Software: ixi-UMS Voice-Mail Server

Version: 7.00 Date: 2/26/2021